USAID | DELIVER PROJECT, Task Order 4
The USAID | DELIVER PROJECT, Task Order 4, is funded by the U.S. Agency for International Development (USAID) under contract number GPO-I-00-06-00007-00, order number AID-OAA-TO-10-00064, beginning September 30, 2010. Task Order 4 is implemented by John Snow, Inc., in collaboration with PATH; Crown Agents USA, Inc.; Eastern and Southern African Management Institute; FHI 360; Avenir Health for Development, LLC; LLamasoft, Inc; The Manoff Group, Inc.; Imperial Health Sciences; Asociasion Benefica PRISMA; and VillageReach. The project improves essential health commodity supply chains by strengthening logistics management information systems, streamlining distribution systems, identifying financial resources for procurement and supply chain operation, and enhancing forecasting and procurement planning. The project encourages policymakers and donors to support logistics as a critical factor in the overall success of their healthcare mandates.

USAID | DELIVER PROJECT, Task Order 5
The USAID | DELIVER PROJECT, Task Order 5, is funded by the U.S. Agency for International development under contract no. GPO-I-00-06-00007-00, order number AID-OAA-TO-10-00066, beginning September 30, 2010. Task Order 5 is implemented by John Snow, Inc., in collaboration 3i Infotech, Inc.; Crown Agents USA, Inc.; FHI 360; Logenix International, LLC; The Manoff Group, Inc.; PATH; Imperial Health Sciences, and UPS Supply Chain Solutions, Inc. TO5, Task Order Procurement and Distribution of Essential Public Health Supplies, supports USAID’s procurement and delivery of condoms, contraceptives, and other essential public health supplies to USAID-supported programs worldwide with a goal of 95 percent on-time delivery. The task order provides direct procurement, warehousing, freight forwarding, demand planning, order management, management information system, and, upon request, short-term technical assistance services in support of this goal.

USAID | DELIVER PROJECT, Task Order 7
This document was prepared by staff of the USAID | DELIVER PROJECT, Task Order 7, which is funded by the U.S. Agency for International Development (USAID) under contract number GPO-I-00-06-00007-00, order number AID-OAA-TO-11-00012, beginning on March 28, 2011. Task Order 7 is implemented by John Snow, Inc., in collaboration with 3i Infotech, Inc.; Crown Agents USA, Inc.; FHI 360; Foundation for Innovative New Diagnostics; Logenix International, LLC; The Manoff Group, Inc.; MEBS Global Reach, LC; PATH; Imperial Health Sciences; Population Services International; Social Sectors Development Strategies, Inc.; UPS Supply Chain Solutions, Inc.; and VillageReach. Task Order 7 supports USAID’s goal of reducing the malaria burden in sub-Saharan Africa by procuring and delivering safe, effective, and high-quality malaria commodities; by providing technical assistance and on-the-ground logistics expertise to strengthen in-country supply systems and build capacity for managing commodities; and by improving the global supply and long-term availability of malaria commodities.

Recommended Citation

Abstract
From 2012-2016, the USAID | DELIVER PROJECT provided support to the Ministry of Health in the implementation of the Emergency Medicines Fund Program with the procurement and delivery of essential medicine kits, including antimalarial treatments, and long-lasting insecticide-treated bed nets for the people of South Sudan. The project also engaged in system strengthening efforts at the Central Medical Stores with the provision of staff trainings; IT and material handling equipment; and installation of racking.

Cover photo: Mathiang villagers take up the “last mile” delivery in Upper Nile state. Credit: Inter-Church Medical Assistance.

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Project Overview

The USAID | DELIVER PROJECT, in partnership with ministries of health and other organizations, improves health outcomes in developing countries by increasing the availability of health supplies. For more than 30 years, USAID has been a world leader in providing health commodities to field programs — a critical component of health program success.

In 2011, following 40 years of regional conflict, South Sudan gained national independence. The new country was faced with building its health, agriculture, education, economic, and physical infrastructure.

South Sudan, one of the poorest countries in the world, had a per capita gross domestic product (GDP) of U.S.$1,113 in 2014, ranking it 169 out of 204 countries (World Bank 2015). Accessing health services is difficult for many because of a severe shortage of health workers, nurses, and doctors in the health system (Global Health Policy Center 2012).

USAID and other development partners committed to providing assistance to South Sudan. One immediate priority was to ensure the availability of essential health commodities to prevent malaria, tetanus, childhood, and other endemic diseases; especially among the most vulnerable populations: women and children.

On behalf of the South Sudan Ministry of Health (MOH), the USAID | DELIVER PROJECT (the project) and international donors and partners implemented the Emergency Medicines Fund (EMF) to ensure medicines and commodities were procured, stored, and delivered to county health departments and hospitals. The project provided capacity building support to staff at the MOH and the MOH Central Medical Stores in Juba.

The project also conducted a reproductive health quantification and reproductive health commodity security (RHCS) assessment. Based on the assessment, a draft RHCS strategy was developed.
Investment in Commodity Support and Technical Assistance

In South Sudan, the USAID | DELIVER PROJECT contributed to health commodity security through the EMF program, ensuring that county health departments had the essential medicines they needed. Shortly after independence, the end of a World Bank-managed, multi-donor trust fund activity left essential medicines in urgent demand. In July 2012, USAID, the U.K. Department for International Development (DFID), and the Norwegian Ministry of Foreign Affairs jointly developed the EMF to prevent stockouts at health facilities.

The EMF procured and distributed kits that included 102 products packaged in 90 unique kit combinations to treat malaria, administer vaccines, and ensure maternal health.

These kits were categorized and packed specifically for referral, state, and county hospitals, as well as Primary Health Care Centers (PHCC) and Primary Health Care Units (PHCU).

The EMF also provided supply chain systems strengthening activities for staff at the MOH and at the MOH Central Medical Stores (CMS) in Juba.

During the initiative, the total commodity support was approximately U.S.$35.2 million, with an additional U.S.$17.9 million spent on technical assistance to improve the CMS capacity and strengthen warehouse supply chain management skills.
Malaria

Ensuring availability of long-lasting insecticide-treated bed nets and antimalarial drugs protects the most vulnerable populations.

Malaria is endemic in all regions of South Sudan, particularly during the April to October rainy season. The disease results in 54 deaths per 100,000 (WHO 2015b), accounts for 20–40 percent of all visits to health facilities, and 30 percent of all hospital admissions (HMIS 2012).

Long-lasting insecticide-treated bed nets (LLINs), antimalarial drugs, and ancillary supplies are not routinely available at county health departments, which makes protection, diagnosis, and treatment difficult.

U.S.$3.1 million spent to procure LLINs and antimalarials

750,000
LLINs procured (2012–2015)

3,750,000
Rapid diagnostic tests procured

7,428,600
Antimalarial treatments procured

Cases

**Essential Medicines**

Access to essential medicines determines the basic quality of health for women and children in at-risk areas.

After decades of regional conflict, South Sudan’s health system remains fragile—it lacks necessary supplies, infrastructure, and financial and human resources to ensure quality services for its citizens. The maternal mortality rate is 730 per 100,000 live births and the under-five mortality is 99 per 1,000 live births (WHO 2015).

The essential medicines needed to combat this risk are routinely unavailable at county health departments. The MOH, with international support through the EMF, continues to improve its ability to provide essential health services, especially childhood vaccines, malaria prevention and treatment, and prenatal care.

Procurement and delivery of health commodities is critical to making these services accessible.

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**Percentage of women ages 15–49 who gave birth in the two years preceding the survey by person assisting at delivery.**

Source: Government of the Republic of South Sudan. Ministry of Health. 2010
Technical Assistance
Delivering high-quality health care to patients and clients requires health facilities and dispensaries to have a full supply of medicines and other health products. This necessitates 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 South Sudan, these interventions include—

**Strengthen Logistics System Performance**
- Procuring Essential Medicines and Health Commodities
- Providing Safe and Appropriate Storage Space
- Distributing Health Commodities

**Increase National Commitment to Commodity Security**
- Increasing Family Planning Commodity Security

**Build Sustainable Capacity**
- Building Capacity in Good Warehousing Practices and Supply Chain Management
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 fostering global commitments. The project’s supply chain integration framework guides these efforts.

In the public health setting, an integrated supply chain links everyone involved in managing essential health commodities into one cohesive supply chain management organization, ultimately helping clients access quality healthcare services and supplies.
Procuring Essential Medicines and Health Commodities

International donors provided the project with funds to procure much-needed essential medicines, malaria commodities, and LLINs for South Sudan.

Frequently, essential medicines are not available at health facilities in South Sudan. From June 2013 to March 2016, the project supported the MOH by using international donor funds to procure and deliver essential medical supplies.

The health commodities in the EMF kits were manufactured and assembled at several locations; they were kitted and delivered by ship or air to Juba. From there, commodities were delivered by road or air to all 81 counties, in all 10 states.

The project also procured commodities for malaria treatment, including rapid diagnostic test kits, artemisinin-based combination therapies (ACTs), and severe malaria treatments. In addition to the EMF kits, the project procured 750,000 LLINs for malaria prevention.

*including sub-kits
Missionpharma - Execution Plan-Executive summary Presentation - August 2013
Providing Safe and Appropriate Storage Space

Dejunking and refurbishing warehouses created additional storage space at a low cost—protecting supplies and improving commodity security.

Providing safe and adequate storage for medicines and commodities while in transit is critical to ensuring that they are available for the end user.

In South Sudan, a pharmaceutical logistics system is in the early stages, but storage conditions at the central, regional, county, and health facility-levels vary. Most health facilities cannot keep more than a three month supply of kits.

CMS capacity has improved, but it still cannot consistently meet the warehousing and distribution demands, requiring continued support and improvement.

In 2012, to ensure the safe transfer of procured commodities, the project conducted an assessment of the CMS warehouse.

The EMF supported select warehouse renovations at the CMS to improve storage conditions and handling capacity of the CMS.

Warehouse Improvements

- Dejunked Konyo Konyo and installed racking at both CMS warehouses.
- Refurbished Konyo Konyo warehouse, office, and toilet facilities.
- Installed air conditioning equipment at CMS warehouses.
- Updated electrical wiring and improved lighting at Konyo Konyo warehouses.
- Provided material handling equipment.
- Provided 1,718 pallets.
- Developed a stock card inventory management system and printed stock cards.
- Implemented pest control and cleaning activities at Konyo Konyo and Riverside warehouses.
Distributing Health Commodities

An innovative and flexible distribution strategy positively impacts health outcomes by improving the availability of health commodities.

Transportation infrastructure in South Sudan remains poor. A country roughly the size of Texas, South Sudan has only about 250km of paved roads. The northern conflict-affected states are particularly under-developed and during the rainy season, from April to October, the numerous unpaved roads become impassable.

A pharmaceutical assessment in 2011 found that 27 percent of health facilities, stores, and pharmacies in South Sudan had a stockout during the previous three months. From 2012 to December 2015, in close consultation with USAID, the MOH, and partners, the project developed distribution plans for delivering EMF kits and other commodities to the 81 county health departments.

The World Food Programme (WFP) transported EMF commodities to the three conflict-affected states—Jonglei, Unity, and Upper Nile. Logenix/Spedag and MEBS transported commodities to the remaining seven states.

At least 280,000 cartons—or 50,000 kits—were distributed to all 10 states; 350,000 LLINs were distributed to 16 county health departments in Central and Western Equatorial states in October 2014. In 2015, Systems for Improved Access to Pharmaceuticals and Services (SIAPS) distributed an additional 400,000 LLINs.

Implementing Partners
CARE International South Sudan
CORDAID
Christian Mission Aid
Coordination of Organizations for Voluntary Service
GOAL South Sudan
Health Pooled Fund
Integrated Service Delivery Program
Inter-Church Medical Assistance
International Committee of the Red Cross
International Medical Corps
International Rescue Committee
John Snow, Inc.
Kissito Healthcare International
MSH/SIAPS
Medair
Médecins Sans Frontières
Ministry of Health
Missionpharma
Nile Hope
Relief International
Save the Children
Sign of Hope
Sudan Medical Care
Universal Intervention and Development Organization
Health Forum
NGO Forum
Health Cluster
Universal Network for Knowledge and Empowerment Agency
World Relief

Distribution Partners
Logenix/Spedag
MEBS
Logistics Cluster/World Food Programme
Increase National Commitment to Commodity Security

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

To help countries create an enabling environment for reproductive health commodity security (RHCS), the USAID | DELIVER PROJECT conducted an assessment and forecasted national reproductive commodity requirements.
Increasing Family Planning Commodity Security

Through a series of assessments and strategic partnerships, South Sudan has improved commodity security for family planning commodities.

The success of essential medicine and malaria commodity security is dependent, in part, on national-level commitment. In South Sudan, the project worked with the MOH and international partners to improve the country’s ability to manage the reproductive health commodity supply chain.

In October 2013, the project assisted the reproductive health division of the MOH in administering a reproductive health commodity security situational analysis, and conducting a maternal health and family planning commodity forecast and quantification for 2014–2016.
One of the most essential components of a robust health supply chain are the staff that implement the logistics tasks. To run effectively, public health supply chains require motivated, trained, and skilled staff with competencies in the various essential logistics functions; they must also be empowered to make decisions that positively impact health supplies and supply chains.

The goal of the project’s capacity building activities is to strengthen human resources in public health supply chain systems in the developing world. By creating a superior workforce, organizations and individual staff can meet their customer service goals, ensure higher performance from the public health personnel, and; therefore, increase the availability of contraceptives and other essential health products.
Building Capacity in Good Warehousing Practices and Supply Chain Management

Logistics training at the CMS improved the competency needed to effectively run a health supply chain at the national level.

Reliable, flexible supply chains require skilled personnel. When the project started working in South Sudan in 2012, few staff at the MOH had training in supply chain management; basic equipment and standard operating procedures (SOPs) were not in place.

The project, through the EMF, provided capacity building opportunities for staff at the MOH and CMS, with the goal of improving warehousing practices by strengthening operations and storage capacity.

To promote standardized pharmaceutical storage and distribution across CMS warehouses, the project facilitated trainings for CMS staff on SOPs.

Twenty-one CMS and MOH pharmacists, storekeepers, and administrative staff were trained on the warehouse SOPs, which the project developed in conjunction with the MOH and SIAPS. Topics included, among others, good warehousing practices; first-to-expire, first-out; and picking and packing.

Fourteen CMS and MOH staff were trained in basic Microsoft Excel skills to improve their ability to manage the Excel-based commodity tracking system. The project also procured computer and printer equipment for the CMS office.

Several CMS staff received mentoring and experiential learning opportunities: a project-seconded warehouse advisor mentored the CMS manager and storekeepers. Additionally, one CMS and one project staff attended a supply chain management course in South Africa.

Another team comprised of one project staff, two CMS staff, and one state-level staff official visited the Medical Stores Department of the Tanzania Ministry of Health and Social Welfare to learn from their practices.

With training and equipment, the project improved the CMS capacity to manage the public health supply chain.
The Way Forward
**The Way Forward**

**Financial Support**
With limited government funding, the Government of South Sudan will continue to require donor support for its ongoing essential medicines and antimalarial commodity needs, for the foreseeable future.

**Supply Chain Strategy**
As health services expand and the environment remains unsettled, there will be an ongoing need for comprehensive supply chain solutions that are robust and flexible. Currently, a single solution does not exist because of the limited financial and human resources needed to develop and maintain a fixed system. There is a continuing need to provide both human resource and institutional capacity building to the MOH in pharmaceutical and supply chain management systems to facilitate a gradual shift from the current ‘push’ to a ‘pull’ system where consumption data is available from health facilities to make decisions.

**Data Management and Visibility**
Essential logistics data—such as consumption rates and patterns—remain extremely limited because they are inconsistently captured and reported. This makes it difficult to accurately forecast demand; make informed quantification and procurement decisions; and, thus, reduce stockouts and expiries.

Continued support and extensive training are necessary for building local capacity to manage data collection and analysis.

**Human Resources**
Health workers at all levels still lack the skills to capture, report, and use logistics data. A reporting system for tracer drugs has been implemented, but the forms have not been rolled out nationwide. Urgent needs for the country include further training on inventory control, use of LMIS forms, and ways to practice good logistics management.
### Acronyms

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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACT</td>
<td>artemisinin-based combination therapy</td>
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<td>CHD</td>
<td>county health department</td>
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<tr>
<td>CMS</td>
<td>Central Medical Store</td>
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<tr>
<td>DFID</td>
<td>Department for International Development (UK)</td>
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<tr>
<td>EMF</td>
<td>Emergency Medicines Fund</td>
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<tr>
<td>GDP</td>
<td>gross domestic product</td>
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<tr>
<td>HMIS</td>
<td>health management information system</td>
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<tr>
<td>JSI</td>
<td>John Snow, Inc.</td>
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<tr>
<td>LLIN</td>
<td>long-lasting insecticide-treated bed net</td>
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<td>LMIS</td>
<td>logistics management information system</td>
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<tr>
<td>MOH</td>
<td>Ministry of Health</td>
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<tr>
<td>NMFA</td>
<td>Norwegian Ministry of Foreign Affairs</td>
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<td>RHCS</td>
<td>reproductive health commodity security</td>
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<td>PHCC</td>
<td>Primary Health Care Center</td>
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<td>PHCU</td>
<td>Primary Health Care Unit</td>
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<td>SIAPS</td>
<td>System for Improved Access to Pharmaceuticals and Services</td>
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<tr>
<td>SOP</td>
<td>standard operating procedure</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>WHO</td>
<td>World Health Organization</td>
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<td>WFP</td>
<td>World Food Programme</td>
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Further Reading


References


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