

# USAID | DELIVER PROJECT

## Final Country Report

Pakistan



**USAID | DELIVER PROJECT**  
FROM THE AMERICAN PEOPLE





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Pakistan

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## **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.

### **Recommended Citation**

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### **Abstract**

This report summarizes the work conducted by the USAID | DELIVER PROJECT in Pakistan from 2009–2016. The project provided technical assistance in family planning and vaccine product availability by strengthening the health supply chain and improving the environment for commodity security.

Unless otherwise stated, all photos in this document are credited to the USAID | DELIVER PROJECT.

Cover photo: In 2012, Mrs. and Mr. Yaqub visit lady health worker Shahnaz Kousar at her health house Ward 5, Dhobi Mohalla, Dogron Kalan, Punjab Province, Pakistan. Photo credit: Derek Brown for USAID.

## **USAID | DELIVER PROJECT**

John Snow, Inc.

1616 Fort Myer Drive, 16th Floor

Arlington, VA 22209 USA

Phone: 703-528-7474

Fax: 703-528-7480

Email: [askdeliver@jsi.com](mailto:askdeliver@jsi.com)

Internet: [deliver.jsi.com](http://deliver.jsi.com)

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# Project Overview and Context

Photo credit: Derek Brown for USAID.

# Project Overview

The USAID | DELIVER PROJECT (the 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.



From 2009–2016, the USAID | DELIVER PROJECT supported the government of Pakistan (GOP) in implementing a number of supply chain strengthening interventions to achieve sustainable improved

systems and greater data visibility throughout the country's health supply chains for contraceptive, tuberculosis, and immunization products.

Starting in 2009, the project launched interventions to improve commodity availability and storage conditions at the central level. The project helped implement state-of-the-art supply chain operations, including extensive improvements to the central warehouse in Karachi, the Federal Expanded Program on Immunization (EPI) Warehouse, and the Lahore Medical Store Depot (MSD).

In 2011, Pakistan's 18th Constitutional Amendment decentralized health and population matters to the provinces, introducing a number of new challenges to the provision of family planning (FP) supply chain services in the areas of procurement, storage, and transportation. In an effort to mitigate some of these problems, the project developed and implemented a web-based logistic management information system (LMIS)

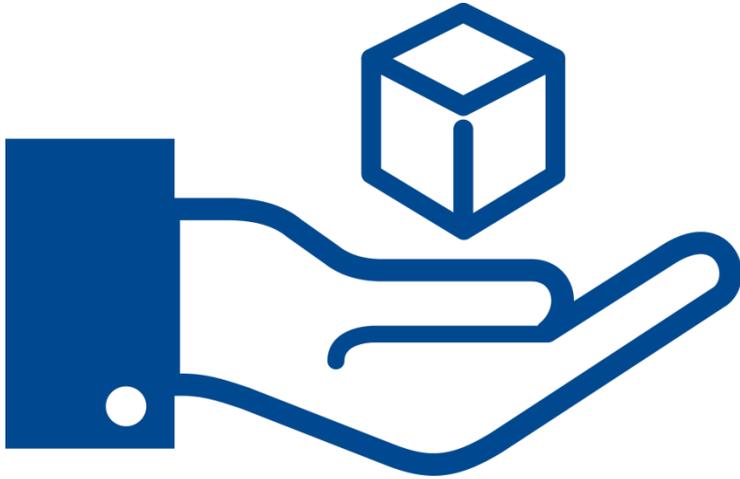
for contraceptives in all of Pakistan's districts.

In 2012, following a measles outbreak in Sindh, the GOP asked the project to develop and implement an LMIS for vaccines (vLMIS). The project launched this system in 2013 in 54 polio endemic and priority districts, and later extended it to 96 districts. The GOP is planning to extend the vLMIS to all districts of the country.

Along with the implementation of new systems, the project introduced a comprehensive set of capacity building interventions, including logistics training at all levels to support new and updated LMISs, a pre-service training program within the Health Services Academy, and the development of standards and guides used by personnel in day-to-day operations.

A special procurement of two high-speed, state-of-the-art ambulance boats helped the population living near Pakistan's Lake Attabad, which was cut off from roads after a massive landslide. The boats were donated to the Government of Pakistan by USAID and are used by patients and mothers needing urgent transportation to medical facilities for critical treatments.

# Investment in Commodity Support and Technical Assistance

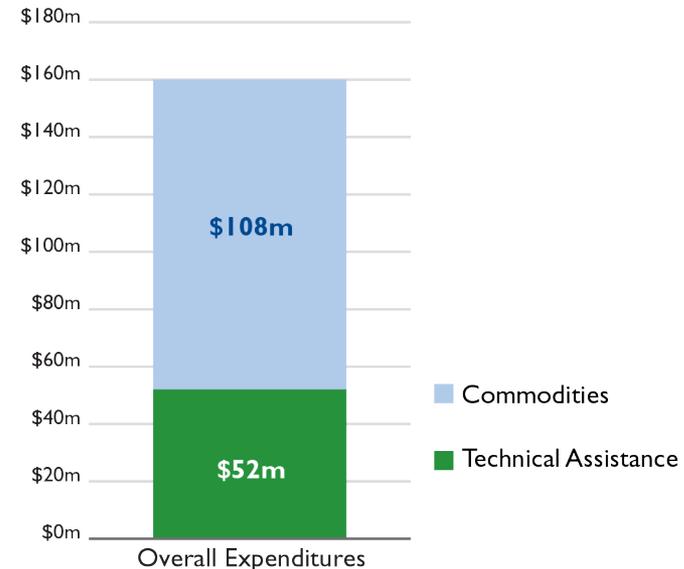


The USAID | DELIVER PROJECT, in collaboration with the GOP, helped improve population health in Pakistan through health supply chain strengthening and commodity procurement. The project worked closely with the Planning Commission of Pakistan, the Ministry of National Health Services, Regulations and Coordination (MONHSR&C), provincial and regional Departments of Health and Population Welfare, UNFPA, and nongovernmental organizations (NGOs).

The project provided extensive technical support in the areas of contraceptive forecasting, procurement planning, warehouse management, supply chain strengthening, and automation of warehouses. To improve data visibility throughout the supply chain, the project implemented web-based LMIS for contraceptives, vaccines, and tuberculosis (TB) drugs. Across the country, provisions were made for information technology hardware support. The project

trained more than 6,500 GOP staff on LMIS, procurement, warehousing, and logistics management. The project also developed more than 60 publications related to procurement, quality assurance, training, warehousing, and monitoring.

Over the life of the project, \$108 million of the total project investment of \$160 million was allocated to contraceptive procurement, leading to increased stock availability at service delivery points (SDPs). Availability of reliable data for decisionmaking combined with project advocacy spurred the provinces to allocate \$87 million for contraceptive procurement and transportation for the period 2014–2019.



## Family Planning

Availability of FP commodities had been a chronic public-sector problem across Pakistan. Frequent stockouts prevented the provision of FP services to people who needed them.



The 2006–2007 Pakistan Demographic Health Survey (PDHS) showed that approximately 30 percent of married women of reproductive age (MWRA) were using some form of FP. Of these, 8 percent used a traditional method and 22 percent a modern method. Of the approximately 25 percent of women who had an unmet FP need, two-thirds wanted to limit pregnancies and one-third wanted to control time between pregnancies.

The 2012-2013 PDHS showed that the overall contraceptive prevalence rate had climbed to 35.4 percent, of which approximately 25 percent were modern methods. The overall increase in contraceptive prevalence rates remained at 1 percent per annum. Based on the last DHS, 6 million women have unmet FP needs.

To increase access to FP commodities and contraceptive use, the project used a multi-pronged approach that ensured sustainable improvements throughout the contraceptive supply chain. Interventions ranged from systemic improvements in procurement, transport, and distribution to infrastructure upgrades and development of policy guidelines, as well as capacity building efforts at all levels of the supply chain. All of these initiatives contributed to stabilizing and increasing the continuous availability of commodities.

### USAID | DELIVER PROJECT

Shipments generated 65 million couple years protection (CYP)

**15.7 million**

Unintended pregnancies prevented

**365,800**

Infant deaths prevented

**158,700**

Child under 5 deaths prevented

**18,000**

Maternal deaths prevented

# Vaccines

Pakistan is a major consumer of vaccines, spending approximately US\$450 million on routine immunization and US\$60 million on polio prevention campaigns annually.



The 2012–2013 PDHS reported routine immunization national coverage at just 54 percent. A contributing factor to low coverage rates was the lack of performance accountability for vaccine supply chain logistics.

To improve governance and accountability for vaccine consumption and cold chain data, the project developed and implemented a web-based vaccine LMIS at each tier of the supply chain. The vLMIS incorporates bar coding as part of the inventory control system to track and trace availability of the commodities. A web-based LMIS dashboard allows EPI managers to review reports online and take corrective actions. Support to Pakistan’s vaccine supply chain also included extensive renovations and reforms at the Federal EPI Warehouse, resulting in International Organization for Standardization (ISO) 9001 certification.

The project implemented the vLMIS in 96 of the country’s 161 vaccine districts, where approximately 60 percent of the population is located. Over the next several years, the GOP plans to continue expansion of the system to the remaining districts. The vLMIS has increased government accountability for vaccines and improved cold chain data visibility. Such improvements have contributed to an increase in coverage through stock availability and a reduction in wastage through better monitoring and analytics.

## Major Vaccine Supply Chain Accomplishments

Improved vaccine commodity management by—

- Implementing vaccine logistics management information system
- Establishing vLMIS operations center for periodic review of national vaccine logistics framework
- Renovating Federal EPI warehouse with increased storage capacity and automated warehouse operations
- Improving warehousing standard operating procedures (SOPs) and developing human resource capacity.





# Technical Assistance

# Technical Assistance Overview

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 USAID | DELIVER 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 Pakistan, these interventions included—

## Strengthen Logistics System Performance

- Increasing Health Commodity Data Visibility
- Improving Warehouse Management
- Expanding Contraceptive Logistics Management Information System (cLMIS) to the Facility Level



## Increase National Commitment to Commodity Security

- Forecasting and Supply Planning
- Advocating for Supply Chain Management Change
- Developing Commodity Security Committees



## Build Sustainable Capacity

- Building Capacity for Nationwide LMIS Implementation
- Establishing a Pre-Service Training Program in Supply Chain Management
- Increasing Human Resource Capacity through Supply Chain Policies, Standards, and Operational Guidelines.





## Strengthen Logistics System Performance

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 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 involved in managing essential health commodities into one cohesive supply chain management organization, ultimately helping clients access quality health care services and supplies.

## Increasing Health Commodity Data Visibility

Web-based LMIS improved data visibility and led to a dramatic decline in stockouts of key health commodities between 2010 and 2016.

In response to the GOP's request to enhance the accuracy of logistics data for policy-level officials at health and population departments and NGOs in Pakistan, the project designed and implemented an LMIS that collects, organizes, and reports data to facilitate informed logistics system decisions.

In July 2011, after an extensive consultative process with public and private sector stakeholders, Pakistan's contraceptive LMIS (cLMIS) was piloted in 19 GOP-identified districts across the country. By 2012, it was scaled up to all districts.

In 2014, following the successful implementation of the cLMIS, the system was adapted for vaccines with specific requirements for routine immunization, including inventory management, consumption reporting, cold chain equipment management, and supplementary immunization activities. The vLMIS is currently implemented in 96 districts.

The LMIS reduced paper-based reporting and helped ensure timely reporting by trained district and union council-level operators, which enables managers to conduct quality assurance of supply chain tiers and highlight stock, transportation, financing, and human

resource (HR) capacity challenges.

The LMIS also optimized health systems data reconciliation at the grass roots level. Key cLMIS insights identified bottlenecks in data management and ways to improve data quality at all levels and sectors. Improved data visibility ensured superior stock monitoring, from procurement to last-mile product availability.

Web-based end-to-end dashboards made the cLMIS data for the entire supply chain visible to authorized users. The cLMIS intervention led to a continuous decline in stockout of contraceptives from 37 percent in 2011 to 13 percent in 2016. In 2015, the project provided rigorous technical assistance on using data analytics to improve data quality. Data error rates dropped from 15 to 5 percent.

### LMIS Development



**2016**

vLMIS scaled up to 96 districts

**2014**

vLMIS launched and implemented in 54 priority districts

**2013**

cLMIS adapted to include reporting for TB drugs

**2012**

cLMIS scaled up nationwide

**2011**

cLMIS piloted in 19 districts

## Improving Warehouse Management

Warehouse rehabilitation and reform enabled more efficient and effective management of commodities at the central level.

### Central Warehouse

From 2009–2011, the project assisted the GOP in rehabilitating the Central Warehouse in Karachi, transforming it into a modern storage facility able to handle the growing volume of commodities needed in the country.

Improvements included increasing warehousing capacity from 18,000 to 50,000 sq.ft. and introducing modern warehousing practices, such as automated inventory management and barcoding, which increased data visibility and reduced the workload by 30 percent.

Elimination of a provincial supply chain tier saved time and money, as commodities were distributed directly from the Central Warehouse to districts. The Central Warehouse became ISO 9001 certified in 2013.

### Medical and Supplies Depot, Punjab DOH

In 2013-14, policymakers and implementers from other provinces visited the Central Warehouse to view, first hand, how modern warehousing practices could improve the flow of commodities. Impressed with the improvements, the (Department of Health (DOH) in Punjab allocated a budget for reforming their provincial Medical and Supplies Depot (MSD) located in Lahore. In early 2016, with project support, similar reforms were carried out at MSD, enabling best practices in commodity management.

### Federal EPI Warehouse

Following the loss of 1.3 million doses of pentavalent vaccine in February 2015, the GOP asked the project to reform the Federal EPI Warehouse to solve the problems that led to the loss. The project worked with the GOP, the World Health Organization (WHO), UNICEF, and other international agencies to improve the logistics and storage environment, increase storage capacity, and implement the vLMIS at the federal EPI.

The project added four cold rooms, which enhanced storage capacity for proper stacking. Vaccines and dry stores at the facility were restacked and reorganized according to WHO standards, which enabled application of first-to-expire, first-out (FEFO) principles.

Pallets and racking for dry stores tripled the storage space, and the provision of mechanical equipment introduced robust and efficient warehousing practices. Warehousing policies and guidelines were developed and staff were trained and reoriented to put the new guidelines into practice.

The vLMIS operations center makes data visible and facilitates analysis to prevent loss and ensure timely actions. These project interventions enabled the Federal EPI warehouse to become ISO certified.

## Results



## Expanding cLMIS to the Facility Level

Implementing the cLMIS at service delivery points improved the quality of last-mile data.

Since 2012, all districts in Pakistan have used the project-developed cLMIS to improve the quality of supply chain data, particularly at the last mile. To further improve the data, the project extended the cLMIS to Population Welfare Department SDPs in Punjab, Sindh, and Khyber Pakhtunkhwa (KPK) provinces. As a result, these facilities have reported high-quality, timely data on a regular basis since 2015. Reporting rates reached 100 percent for all three provinces in the spring of 2016.

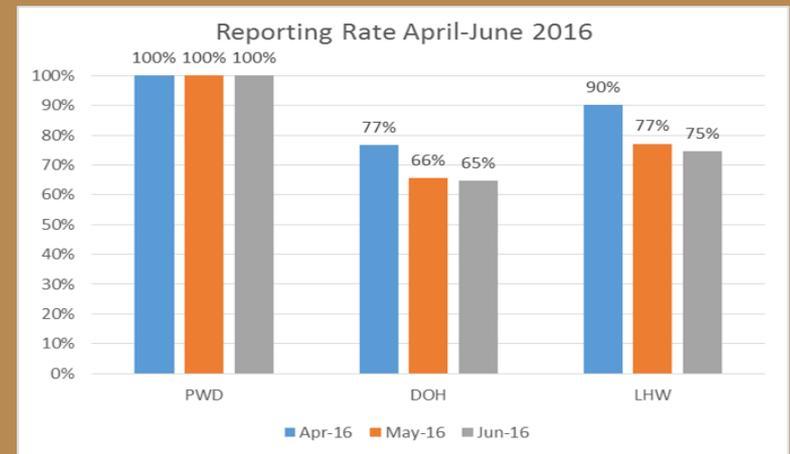
The SDP-level data now collected through the cLMIS provides provincial governments with greater visibility into consumption and stock data in the three provinces and enables them to make informed decisions about FP commodities.

Based on the positive impact of the Population Welfare Department (PWD) cLMIS, the DOH of the three provincial governments began to scale the cLMIS to additional service delivery points. Beginning in 2015, the project and the Punjab DOH co-financed and supported training-of-trainers for selected master trainers and the printing of service delivery point-level consumption reporting forms. The master trainers from the DOH also provided routine monitoring support. With technical support from the project, Punjab rolled out cLMIS web-based trainings to the districts.

The data visibility gained from web-based reporting from the SDPs enables districts to take corrective follow-up actions and make instant supply decisions, which is critical to maintaining continuous product availability.

### Reporting Levels for the Population Welfare Department, Department of Health, and Lady Health Worker Programs

April–June 2016



## Reporting on Three Contraceptive Indicators

To monitor progress for the project’s comprehensive commodity support and technical assistance for contraceptives, three main indicators were used as part of the performance monitoring plan:

### 1. Number of districts using logistics management information system (LMIS).

Project support included the public sector, as well as social marketing—Family Planning Association of Pakistan and Marie Stopes Society (MSS). Over seven years (2009–2016) of technical assistance, all relevant stakeholders started reporting family planning performance on a single reporting platform—the cLMIS. This indicator shows the number of USG-assisted districts (all departments) using the LMIS to manage their stock of contraceptive commodities.

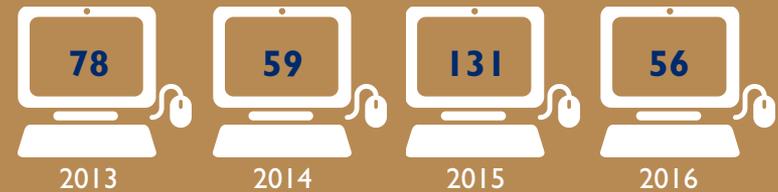
### 2. Percentage of USG-assisted service delivery points that experience a stock out at any time during the reporting period of a contraceptive method that the district is expected to provide.

A study assessed the stock levels of eight contraceptives at district stores and service delivery points (SDPs) to determine last mile contraceptive availability and to identify gaps with the supply and distribution system. The study was also conducted to evaluate the accuracy of the cLMIS data reported by the Government of Pakistan.

### 3. CYP in USG supported programs.

Couple-years of protection generated through USG-supported contraceptives is calculated based on public-sector reported consumption in the cLMIS. Between March and April 2016, more than 1,152,000 CYPs were generated; averting an estimated 331,904 pregnancies due to USAID’s contraceptive support.

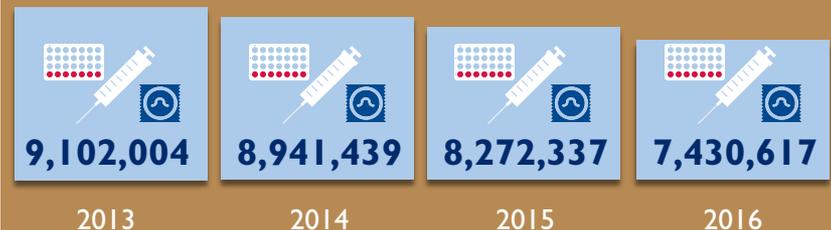
### Number of districts using logistics management information system, LMIS



### Percentage of USG-assisted SD points that experience a stock out at any time during the reporting period of a contraceptive method that the district is expected to provide



### CYP in USG supported programs





## Increase National Commitment to Commodity Security

Commodity security (CS) exists when every person is able to choose, obtain, and use quality contraceptives and other reproductive health products whenever s/he needs them. Strong supply chains alone cannot ensure 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.

## Forecasting and Supply Planning

Using provincial level consumption data, program data, and demographic indicators, the project helped the GOP to strengthen forecasting and supply planning.

When the project began in 2009, forecasting and supply planning were conducted at the national level. After the 2011 decentralization, forecasting and supply planning were prepared in accordance with province-specific consumption data, projected program expansions, and demographic indicators. The project developed and instituted a contraceptive procurement table (CPT)—a data collection tool that stakeholders used from 2010 to 2014 to gather their annual programmatic requirements.

The project helped the provincial health and population departments forecast their yearly contraceptive needs for family planning services using consumption trends, demographic data, and other variables related to increases in family planning demand. The resulting transparent, evidence-based forecasting and supply planning allowed USAID to place orders within the available annual budget parameters.

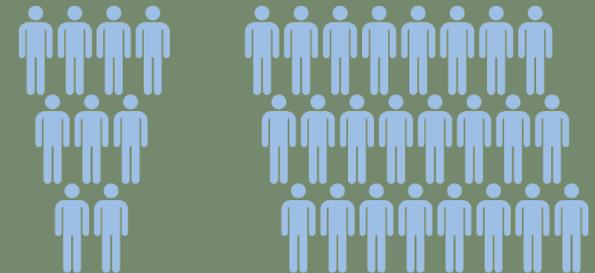
The 2014 CPTs were developed by the GOP, the project, and other stakeholders working together. From 2009–2016, the project procured \$108 million of USAID-funded contraceptives, and following advocacy by the project, the GOP allocated \$87 million for the period 2015–2019. This investment ensured commodity availability across Pakistan for all stakeholders, including social marketing—a major private-sector stakeholder providing FP services and reporting through the LMIS. Consistent availability of commodities reduced instances of stockouts across the country.

According to a recent stock assessment, stock availability at service delivery points rose to 81 percent as a result of contraceptive commodity support provided by the project.

In 2015–2016, Punjab, Sindh, and Khyber Pakhtunkhwa (KPK) provinces completed procurements using GOP-allocated funds and project-supported procurement documents.

### Increase in Couple Years of Protection of Protection

63% increase in CYP over 4 years



2010  
4.5 million CYPs

2014  
8.7 million CYPs

Couple years of protection (CYP) is the estimated protection provided by contraceptive methods during a one-year period, based upon the volume of all contraceptives sold or distributed free of charge.



## Advocating for Supply Chain Management Change

Strategic advocacy initiatives led to budget allocations for contraceptives and strengthened institutional capacity in supply chain management.

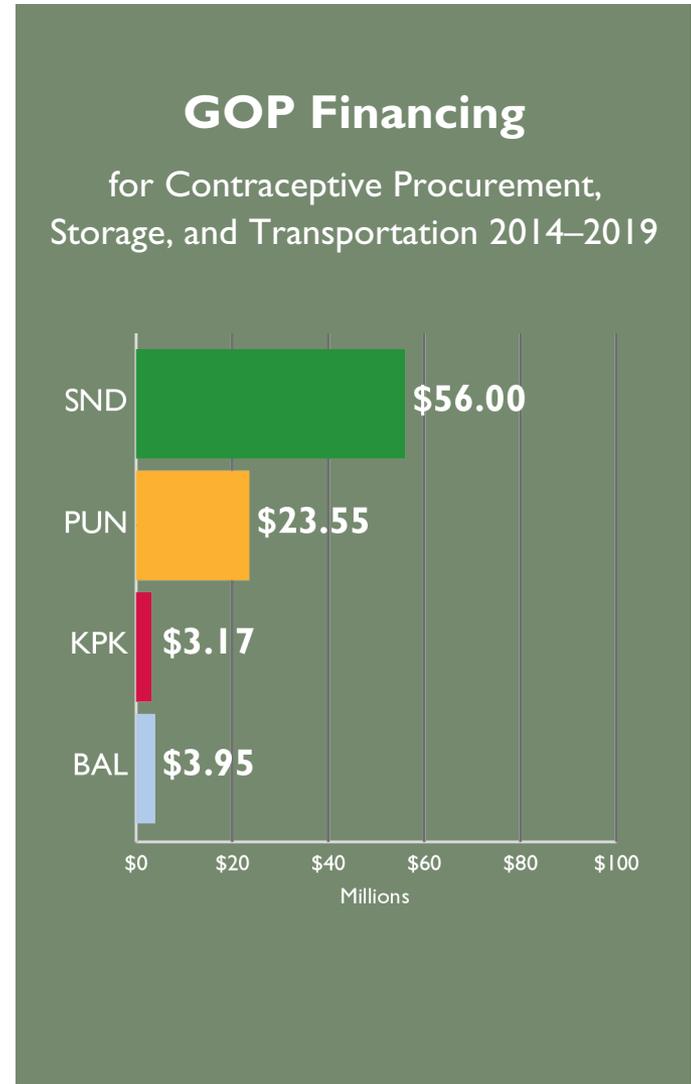
In 2009, the project worked with multiple stakeholders, including Marie Stopes Society and GreenStar, a local social marketing agency, to launch advocacy initiatives to improve commodity security (CS). Initiatives focused on positive policy change, operations, and funding-related elements of the supply chain, including strengthening procurement, warehousing, distribution, data visibility, and utility through LMIS; standardizing operations based on international best practices; and ensuring last-mile delivery.

Advocacy for increasing national budget lines for contraceptives led to a finance allocation of \$87 million in Punjab, Sindh, KPK, and Balochistan for contraceptive procurement, storage, and transportation for the period 2014–2019.

Procurement strengthening efforts led to development and endorsement of federal and provincial manuals. These procurement manuals not only emphasized transparency, but also streamlined GOP procedures and enabled the GOP to initiate independent contraceptive procurements in the aforementioned provinces for the very first time.

Advocacy efforts undertaken by the project in each province resulted in allocation of funds by the national planning commission, as well as increased accountability of procurement activities conducted under streamlined procedures.

In preparing quantification for contraceptives, significant efforts were put in by the project to involve participation of key provincial, as well as federal officials. Armed with the quantification data for each province, regular briefings were held with high-level GOP officials from relevant divisions of various ministries and departments in order to address shortfalls of contraceptives and in-country transportation costs. On the project's initiative, all contraceptives were included, for the first time, in Pakistan's essential medicines list—a requisite for allocating the budget.



## Developing Contraceptive Security Committees

Establishing provincial committees to increase engagement and ensure reproductive health CS.



Participants of the Inter-Provincial Coordination Committee

In 2015, the project, in collaboration with Pakistan's Department of Health (DOH) and PWD along with local and international NGOs, established reproductive health CS committees in provinces, beginning with Sindh, Punjab, and Balochistan.

The committees play an important role in quantification, reviewing the shortfalls in funding and being instrumental in allocation of budget, which has a significant positive effect on product availability by ensuring funds for and timely procurement of contraceptives.

The project provided each committee with a terms-of-reference guide that includes tools for developing guidelines on procurement, distribution, storage, and availability of contraceptives.

Meetings are held on an as-needed basis, and are a forum for supporting capacity-building initiatives on supply chain management, procurement, warehouse management system, storage, and distribution within the public and private sectors, establishing a robust monitoring and evaluation mechanism, and closely monitoring LMIS reporting rates.

In addition to the provincial committees, the project helped establish an inter-provincial coordination committee for reproductive health CS, led by the Federal Secretary of the MONHSR&C. This committee is mainly responsible for formulating contraceptive policy decisions in Pakistan, but also monitors contraceptive status, provincial procurements, Central Warehouse facility use, distribution, and stock levels throughout the country.

Establishing these committees has been a key factor in driving down stockouts of reproductive health commodities. The committees have successfully engaged relevant supply chain stakeholders, enabling them to reach consensus and advocate for the resources needed to maintain availability of critical health supplies.



## Build Sustainable Capacity

An essential component of a robust health supply chain is the staff that implements logistics tasks. To run effectively, public health supply chains require motivated, trained, and skilled staff who are competent in the various essential logistics functions and who are 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 higher performance among public health personnel and, therefore, increased availability of contraceptives and other essential health products.

## Building Capacity for Nationwide LMIS Implementation

Logistics training at all levels helped create expertise to manage the health supply chain more effectively.



Photo: Derek Brown for USAID

The institutionalization and sustainability of a system depends on trained and motivated staff who will continue using and updating it. To support the training of personnel for LMIS and other supply chain functions, the project created a pool of 37 master trainers within the provincial departments of health and population welfare. These master trainers trained 6,758 staff to use the cLMIS, vLMIS, and TB data management information system for data entry, analysis, and decisionmaking.

Additionally, the master trainers trained 550 staff from central, provincial, and regional warehouses on good warehousing practices, forecasting, procurement, requisitioning, distribution, record keeping, and monitoring.

The training curricula, developed in consultation with the federal and provincial governments, was handed over to the government and institutionalized within provincial health development centers (PHDCs) and population welfare training institutes (PWTIs) to help scale up and sustain human resource capacity for the health supply chain.

### In-Service Training for Supply Chain Operations

#### Capacity-Building Initiatives

Module	Participants Trained
Vaccine LMIS	5,036
cLMIS	1,098
TB-DMIS	25
Contraceptive logistics manual	238
Contraceptive procurement procedures	108
Warehousing management	73
SCM	180

## Establishing a Pre-Service Training Program in Supply Chain Management

Project-developed pre-service training courses built institutional capacity to manage and sustain health commodity supply chain trainings at Pakistan's Health Services Academy.



In 2012 and 2013, the project helped develop two certificate courses and one three-credit course on public health supply chain management—the country's first public health supply chain management course.

Students in the Health Services Academy's (HSA) master's program—as well as

logisticians, policymakers, and public health managers from the public and private sectors across Pakistan—can take the three-credit course. While the certificate courses are designed for those already employed in a health sector, anyone interested meeting the HSA admission criteria can also take them.

The courses are institutionalized and taught at the Health Services Academy in Islamabad and attended by participants from all provinces and regions. While the courses were initially introduced with project support, they have become part of the training curriculum at the MONHSR&C. Approximately 25 students take the courses each year.

Responses to post-course evaluations indicated that faculty, management, and students found the courses useful. After receiving training, students reported they could explain logistics concepts and conduct logistics tasks significantly better. Faculty and management now recognize the great importance that logistics plays in a public health system.

Establishing these courses is an important step in ensuring that logistics capacity for critical health programs is developed and sustained within Pakistan's own public institutions.

## Capacity-Building



## Increasing Human Resource Capacity through Supply Chain Policies, Standards, and Operational Guidelines

The project helped develop more than 60 publications that improved supply chain operations and the environment for commodity security.

After the 18<sup>th</sup> Constitutional Amendment devolved all major health and population functions to provinces in 2011, the project worked with provincial departments of health and population welfare and other stakeholders to develop province-specific supply chain and procurement documents and manuals which provided critical guidance for provincial staff to carry out their supply chain operations.

The manuals were endorsed by respective provincial/regional DOHs, PWDs, and public procurement regulatory authorities; they were formally handed over to the GOP and are being institutionalized within PHDCs and PWTIs.

On both the national and provincial level, the project supported development of more than 60 publications that were used to train GOP staff on various supply chain functions. The publications included guidelines, manuals, SOPs, and protocols.

Institutionalized trainings and accompanying publications built supply chain strengthening capacity within federal, provincial, and regional government in the areas of forecasting, procurement, warehouse management, and LMIS.

In addition to the local GOP master trainers, national and international consultants trained mid- to senior-level provincial staff on contraceptive forecasting and procurement processes.

The project significantly increased the number of workforce personnel trained in SCM operations within Pakistan's public sector, as well as the documentation needed to carry out the work consistently.

### Key Supply Chain Documents

- Contraceptive Logistics Manual
- Essential Medicines List
- Contraceptive Procurement Manual
- Medicines and Supplies Procurement Manual
- Central warehouse manuals
- National EPI warehouse manuals
- EPI logistics manuals
- MSD warehouse manuals
- Storekeepers manuals
- SCM Certification Course for HSA
- vLMIS training manuals
- cLMIS training manuals
- TB-DMIS manuals
- Videos







# The Way Forward

# The Way Forward



The project provided hardware and software that empowered staff across Pakistan to support the eLMIS for contraceptives and vaccines. Although system use has spread across the country, challenges in data quality and use remain, as does the challenge of retaining staff in the government system. To realize the benefits of LMIS in forecasting, procurement, and inventory management, well-qualified staff and high-quality data are needed.

A sustained, long-term effort is required to transition from the current stage to the next stage. Efforts to train and improve operational staff capacity and implement technology-based cross checks to increase data reliability are underway. The project recommends that government policies restrict transfer of trained staff, or provide funds and facilities to develop a critical mass of trained field staff.

We also recommend that logistics and supply chain management be institutionalized in the departments through a sustainable, long-term supply chain management strategy. It is equally important

to make use of LMIS data for policy decisions and to ensure data analytics through logistics and procurement cells and vLMIS operation centers.

While the cLMIS is in use across the country, the vLMIS currently operates in only 96 districts. Both systems must be implemented at the sub-district level and below to enable decisionmakers to access all data for the national supply chain. This will facilitate strategic decisions on procurement, distribution, warehousing, and other aspects of inventory control and management across the country.

Technical inputs have expanded the total storage space substantially and improved internal management and distribution at the central warehouse in Karachi. The intervention has been replicated at the Federal EPI facility for vaccines and at the MSD contraceptive facility in Lahore. These are important milestones, but warehousing and its associated functions need to cascade to additional provinces' district and sub-district levels. Improvement in national stock levels and availability at the last mile will not be realized until the entire chain of storage facilities is upgraded and systemized.

## Recommended Future Actions

- Scale up the vLMIS to all districts.
- Expand cLMIS and vLMIS to SDP level across the country with IT hardware support.
- Continue to build GOP staff capacity at all health facility levels to enter real-time data into cLMIS and vLMIS.
- Allocate provincial funds for regular monitoring and supportive supervision.
- Allocate federal government (MONHSR&C) funds for contraceptive procurement and transportation to regional governments and NGOs.
- Establish provincial-level standards for storage distribution.



# Additional Resources

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# Acronyms

CWH	central warehouse
CYP	couple years protection
EPI	Expanded Program on Immunization
FEFO	first-to-expire, first-out
GOP	Government of Pakistan
cLMIS	contraceptive logistics management information system
LMIS	logistics management information system
MONHSR&C	Ministry of National Health Services, Regulations and Coordination
NGO	nongovernmental organization
PHDC	Provincial Health Development Center
PWD	Population Welfare Department
PWTI	Population Welfare Training Institute
SCM	supply chain management
SOP	standard operating procedure

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## Further Reading

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For more information, please visit [deliver.jsi.com](http://deliver.jsi.com).



## USAID | DELIVER PROJECT

John Snow, Inc.

1616 Fort Myer Drive, 16th Floor

Arlington, VA 22209 USA

Phone: 703-528-7474

Fax: 703-528-7480

Email: [askdeliver@jsi.com](mailto:askdeliver@jsi.com)

Internet: [deliver.jsi.com](http://deliver.jsi.com)