

# USAID | DELIVER PROJECT

## Final Country Report

### Tanzania



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





**USAID |  
DELIVER  
PROJECT  
Final Country  
Report**

**Tanzania**

---

## **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**

USAID | DELIVER PROJECT. 2016. *USAID | DELIVER PROJECT Final Country Report: Tanzania*. Arlington, Va.: USAID | DELIVER PROJECT, Task Order 4.

### **Abstract**

This report summarizes the work carried out by the USAID | DELIVER PROJECT in Tanzania from 2006–2016. The project provided technical assistance in malaria prevention and treatment by strengthening the health supply chains and improving the environment for commodity security.

**Cover photo:** Healthcare worker updating the stock ledger.

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

## **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)

---

# TABLE OF CONTENTS

01

## Project Overview and Context

*Pages 7-12*

- ‡ Project Overview
- ‡ Investment in Commodity Support and Technical Assistance
- ‡ Malaria
- ‡ Reproductive Health and Family Planning

02

## Technical Assistance

*Pages 13-26*

- ‡ Technical Assistance Overview
- ‡ Strengthen Logistics System Performance
- ‡ Increase National Commitment to Contraceptive Security
- ‡ Build Sustainable Capacity

03

## The Way Forward

*Pages 27-28*

- ‡ The Way Forward

04

## Additional Resources

*Pages 29-34*

- ‡ Acronyms
- ‡ Further Reading





# Project Overview and Context

# 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 Tanzania, using best practices and innovative approaches, the project developed and implemented robust logistics solutions, fostered supportive commodity security environments, procured and shipped health commodities, and partnered with local organizations to build sustainable capacity.

In line with the USAID and Ministry of Health, Community Development, Gender, Elderly, and Children (MOHCDGEC) strategic health objectives, the project's activities in Tanzania concentrated primarily on six main objectives of intervention:

providing procurement services for U.S. Government and other development partners

supporting the functioning of the logistics management unit (LMU) to support availability of health commodities

coordinating a transparent national quantification and procurement planning process

building local capacity to improve supply chain performance

improving data visibility and use throughout the supply chain

improving system performance to ensure product availability at the last mile.

In addition to these main areas, the project provided ongoing logistics-related technical assistance to numerous USAID-supported partners and programs and focused on promoting commodity security.



# Investment in Commodity Support and Technical Assistance



Prior to the establishment of the USAID | DELIVER PROJECT (the project), pharmaceuticals management was characterized by uncoordinated stakeholder efforts, which affected the distribution of health commodities to the public health sector. Through the MOHCDGEC Pharmaceutical Services Unit (PSU), the Government of Tanzania (GOT) managed the country's health commodity supply chain, while the Medical Stores Department (MSD) were responsible for the procurement and storage of all medicines. Although PSU had a supervisory role over MSD's responsibility to distribute commodities, they did not have the capacity to implement this function.

During the course of project's implementation, MSD's mandate changed from distributing to districts and hospitals (about 500 customers) to direct delivery to over 5,000 service delivery points (SDPs) covering all facilities across the country. This 10-fold increase caused a considerable strain on available infrastructure, human resources, and financial resources, thus affecting the supply chain's performance.

Moreover, sporadic dissemination of information between stakeholders at the policy level impeded effective and timely decisionmaking. This, in turn, affected commodity security in Tanzania and shed light on several other supply chain challenges, such as insufficient capacity to manage and distribute commodities leading to stockouts, and uncoordinated procurements resulting in wastage and expiries.

The project through its Task Orders 4 and 7 provided technical assistance in strengthening the supply chains for reproductive,

maternal, newborn and child health commodities and antimalarials, respectively. This was accomplished by establishing strategic partnerships with the MOHCDGEC in Tanzania Mainland, Ministry of Health (MOH) in Zanzibar, and other pharmaceutical supply chain stakeholders, including development partners, implementing partners, and manufacturers to implement innovative and sustainable interventions. More specifically, the interventions included—

- ❑ supporting U.S. Government-funded procurement of malaria and family planning commodities
- ❑ developing routine quantification and supply plan updates
- ❑ developing and implementing data collection, reporting, and monitoring systems, including the ILSGateway and the electronic logistics management information system (eLMIS)
- ❑ ensuring sustainability through LMU implementation
- ❑ implementing route optimization for health commodity distribution
- ❑ building local capacity to improve supply chain performance through in-service and pre-service training
- ❑ strengthening partnerships and collaboration through knowledge and information sharing among stakeholders in commodity security meetings and technical working groups.

# Malaria

Project-supported procurement and distribution efforts made life-saving antimalarial commodities available to end users.



In Tanzania, 93 percent of the population live in areas where malaria is transmitted. More than 40 percent of outpatient visits are attributable to malaria, resulting in an annual estimated 10–12 million clinical malaria cases.

Under the Malaria Task Order (TO7), with the President’s Malaria Initiative (PMI) funding, the project procured and supported distribution of antimalarial commodities—long-lasting insecticide-treated bed nets (LLINs), rapid diagnostic tests (RDTs), sulfadoxine-pyrimethamine (SP), artemisinin-based combination therapies (ACTs)—to country programs.

The project also strengthened in-country supply systems and their ability to manage antimalarial commodities, which improves the availability of antimalarial commodities at the central level and SDPs. By preventing the transmission of malaria, preventing cases among pregnant women, improving diagnosis, and providing treatment, the antimalarial commodities procured by the project contributed to reduced morbidity and risk of mortality from malaria.



The USAID | DELIVER Project has procured commodities for Tanzania to

Protect against malaria with  
**5.4 million LLINs**

**Treat 18.4 million**  
malaria cases with RDTs

Prevent malaria in pregnancy with  
**2.5 million SP tablets**

**Treat 33 million**  
malaria cases with ACTs

# Reproductive Health and Family Planning

Project quantification technical assistance improved accuracy and quality of forecasts and supply plans to make products available to people.



The Tanzania Demographic and Health Survey (TDHS), 2010, estimated the maternal mortality ratio (MMR) for the 10-year period preceding the survey as 454 maternal deaths per 100,000 live births. In other words, for every 1,000 live births in Tanzania during this period, about four to five women died. This was somewhat attributed to the lack of access to adequate care at the facility level.

The project provided quantification technical assistance and capacity building to the Reproductive and Child Health Section (RCHS) of the MOHCDGEC, resulting in a more robust and accurate forecasting and supply planning.

This led to increased availability and access to reproductive, maternal health, and family planning commodities at the health facility level, thus contributing to improved reproductive and maternal health.

Through the integrated logistics system, reproductive health and family planning commodities were unified in a streamlined management structure for improved program performance and product availability.



The USAID | DELIVER PROJECT shipments provided 28.4 million couple-years of protection

739,600

Unintended pregnancies prevented

181,000

Infant deaths prevented

138,000

Child deaths prevented

23,000

Maternal deaths prevented





# Technical Assistance

# Technical Assistance 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 contraceptives and condoms to field programs—a critical component of the health program’s success.

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 Tanzania, these interventions include—

## Strengthen Logistics System Performance

- Supply Chain System Design and Analysis
- Electronic Logistics Management Information Systems
- Route Optimization



## Increase National Commitment to Commodity Security

- Commodity Security Development and Engagement
- Quantification, Supply Planning, and Financing for Commodity Procurement
- Advocacy



## Build Sustainable Capacity

- In-Service Training in Supply Chain Management Principles
- Pre-Service Training in Supply Chain Management
- Logistics Management Unit





## 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 healthcare services and supplies.

## Supply Chain System Design and Analysis

Designed and rolled out an integrated logistics system to improve system performance.

In 2006, the project continued support to design and strengthen Tanzania's health logistics system. Initial piloting of the Integrated Logistics System (ILS) took place in the Dodoma and Iringa regions, with a final rollout countrywide completed in 2009. Under the ILS, facility managers used a single system to report and manage multiple groups of public health commodities, including malaria testing and treatment products, and prevention of mother-to-child transmission (PMTCT).

In 2011, the project successfully conducted the Zanzibar Integrated Logistics System (ZILS) training. To-date, all health facilities in Zanzibar are using the system to report on and request for commodities.

To routinely monitor commodity availability, diagnosis methods, and treatment of malaria at the health facilities, the project—with the National Malaria Control Program (NMCP) and MOHCDGEC—employed two complementary data collection and analysis tools: the End-Use verification (EUV) surveys and ILS Gateway mobile supply chain data capture. EUV teams visited approximately 220 facilities on a quarterly basis to collect supply chain and malaria case management data. Together, these systems provided stock status information on selected (tracer) health commodities; improved the timeliness and accuracy of paper-based ordering

and reporting from the service delivery points (SDPs); strengthened the accuracy and timeliness of deliveries to SDPs by confirming delivery arrival in real-time; and increased the ability of decisionmakers, at all levels, to monitor facility-level supervision.

The success of these routine monitoring systems in Mainland Tanzania prompted discussions about their use in Zanzibar. Between October 2013 and September 2014, the project developed a supply chain performance management plan (PMP) and designed an EUV survey to monitor the performance of the ZILS. EUV visits began in 2014 with data feeding into the quarterly PMP.

Through this routine monitoring, the project drastically reduced the stockouts of malaria commodities, specifically artemether/lumefantrine presentations, with stockout rates falling from 24 percent in February 2012 to 3 percent in December 2015.

An evaluation of the ILS Gateway revealed that 94 percent of the piloted districts improved the timeliness with which facilities submit their report and requisition forms. Additionally, the findings demonstrated expanded accessibility and visibility of logistics data; increased use of data for supply chain management; and increased accountability, transparency, and responsibility.

### Timeline of the Pull System

In 2006, developed the ILS, where vertical programs were integrated into one system



ILS rollout completed across the country in 2009



In 2012, updated the management tools and changed supervisory roles for order review



Following tool updates, conducted trainings on new ILS features for health facility workers





## Electronic Management of Information Systems



Development and implementation of the eLMIS shortened order lead time and made data available for decisionmaking.

In partnership with the MOHCDGEC, the project supported the development of an effective and sustainable electronic logistics management information system (eLMIS) that provided a common technology platform to improve the collection, management, and use of logistics data. To reduce the multiplicity of reporting systems, the eLMIS maintains uniform data capture in one system, makes data collection more efficient, reduces the workload for those inputting the data at the district level, and provides an immediate interface between the eLMIS and MSD's Enterprise Resource Planning (ERP).

Since 2006, the project supported the Governments of Tanzania and Zambia to strengthen their public health supply chains. During this time, the project identified similar challenges in both countries related to health commodity reporting and requisitioning, order fulfillment, and data visibility in their public health supply chains. In the fall of 2011, to address these challenges, Tanzania and Zambia embarked on a collaborative journey to develop the business requirements for management information systems that could meet their needs. As a result, and with the recognition that both countries shared many of the same requirements, the Ministry of Health of Zambia and the Ministry of Health and Social Welfare of Tanzania formed a joint project to design and implement an eLMIS that could be deployed in both countries.

Beginning in 2013, the project rolled out the eLMIS system through strategic trainings at different levels of the supply chain. Through continuous rollout and training, the project reached all the districts.

The eLMIS now receives electronic Request & Requisitions (R&Rs) from

171 districts on a quarterly basis, for family planning, malaria, and essential medicines commodities.

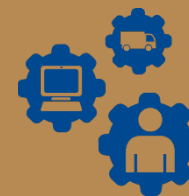
Facilities enter logistics data electronically in their R&Rs and the system automatically computes future needs, reducing the likelihood of errors often caused during manual calculations. Reporting rates were 91% in Jan-Mar 2015 (first quarter of complete rollout) and 93% in January-March 2015, was 91 percent for the ILS and 93 percent in the January-March quarter in 2016. Ministries in both Tanzania Mainland and Zanzibar showed country ownership by officially launching the eLMIS platforms in June and July 2015, respectively.

Since implementation, district pharmacists noted that the system has helped simplify the processes of filling in the R&R forms. District pharmacists can review the data more readily and follow up promptly to clarify discrepancies.

### Results



Reporting rates for ILS commodities reach 93 percent



ILS Gateway improved user attentiveness to timely stock count performance and R&R submission

## Route Optimization

Transportation optimization efforts yielded a 61 percent drop in quarterly fuel costs and 43 percent drop in delivery time.



Following the complete roll out and integration of all facilities into ZILS in December 2013, the project conducted a transportation strategy analysis in Zanzibar to model the planned distribution routes. The optimized routing revealed cost-saving opportunities over the baseline scenario, in the fewest number of routes, to deliver all shipments; the shortest total distance traveled to deliver to all facilities, and the room for growth in shipment volume without making major changes in route structures. This information gave the Central Medical Stores (CMS) and the Ministry of Health in Zanzibar (ZMOH) staff critical tools to plan their distribution efforts and responsibly allocate resources in their fleet.

In 2014, the project facilitated a distribution optimization exercise for the MSD to increase distribution performance, improve services, and reduce cost. The project undertook a mapping exercise to establish the road networks available to the transporters in 21 regions of Tanzania Mainland and Zanzibar, covering the MSD and CMS distribution network.

The MSD now has a high-quality digital road network with over 60,000 kilometers of additional roads, and corresponding maps for any future optimization. The updated road network has a greater level of detail, compared to the initial version available through Open Street Map. Using this improved road network and transportation modeling software, MSD zonal managers made more accurate route plans and schedules.

With the shift to a direct delivery model—from the zonal MSDs to health facilities—efficient and reliable transportation is a necessity. In collaboration with LLamasoft, the project facilitated a distribution optimization exercises for the MSD in Mtwara, Moshi, Dar es Salaam, Mwanza, and Tabora zones using LLamasoft’s Transportation Guru. Route optimization allows zonal managers and other decisionmakers to make strategic decisions about where they invest resources and plan distributions. In Mtwara, initial findings indicated that optimized distribution routes achieved a net decrease of 36 percent in distribution costs against the total annual budget estimates for fiscal year 2013–2014.

Fuel costs were down, from \$9,300 to \$3,600 per quarter; and total number of days to deliver commodities to health facilities, from seven to four. Transportation optimization has led to efficiencies in managing deliveries; reducing days on the road, per diem, and fuel costs; and increasing stock availability at the last mile.

Total distribution cost  
reduced by 36 percent in  
Mtwara



## 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.

# Commodity Security Development and Engagement

Collaborative strategic planning efforts with stakeholders built commitment and a coordinated, costed action plan for supply chain investment.



In 2013, the project conducted a strategic review of the national supply chain to identify systemic strengths and challenges within MSD's operation and at other levels of the national healthcare system. Through this activity, the project identified practical and implementable interventions to address gaps and improve efficiencies; this would ensure increased availability of commodities within Tanzania's public sector health system. Recognizing the importance of the context in which MSD operates, the assessment also examined and synthesized broader systems issues affecting the availability of commodities, the performance of the supply chain, and the ability of MSD to fulfill its responsibilities. Working with critical supply chain stakeholders—MOHCDGEC, President's Office Regional Administration and Local Government, MSD, Tanzania Food and Drugs Authority, Regional Health Management Teams,

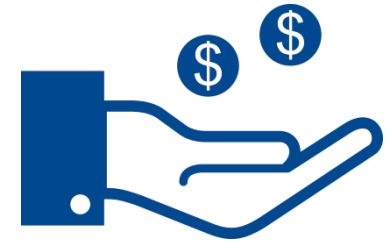
Council Health Management Teams, and development partners—the project facilitated a common understanding of the critical supply chain challenges and achieved consensus in identifying priority interventions for future investment.

In 2014, Tanzania began the formal development and implementation of the National Pharmaceutical Sector Action Plan (NPAP); a five-year strategic framework guiding the implementation of supply chain strengthening activities. During the process, the project and Supply Chain Management Systems (SCMS project) worked with the World Bank, Global Fund to Fight AIDS, Tuberculosis and Malaria, Department for International Development, and Danish International Development Agency to obtain stakeholder inputs and to build collaboration within the donor community. Stakeholders estimated the cost at \$42,939,536 for the first three years of implementation for all interventions. In 2016, the MOHCDGEC formally adopted and launched the NPAP for 2015–2020. The fully adopted plan is the roadmap for

achieving the critical supply chain interventions, with clearly delineated interventions and responsibilities for all involved stakeholders. As a national-level plan, the NPAP prevents duplication of effort among donors and creates a uniform approach for implementing supply chain system strengthening. Similarly, in November 2013, the Zanzibar Ministry of Health (ZMOH) conducted a strategic review of the national supply chain for health commodities. The review examined and synthesized broader system issues affecting the availability of commodities, the performance of the supply chain, and CMS's ability to fulfill its responsibilities. Supply chain partners and stakeholders proposed interventions in five key areas: financing, policy and planning, warehousing, inventory management and distribution, systems design and the logistics management information system (LMIS); procurement and the private sector and human resources. Following this, a three-year costed supply chain action plan, estimated at over \$25,000,000, was developed and is currently being successfully implemented.

## Quantification, Supply Planning, and Financing for Commodity Procurement

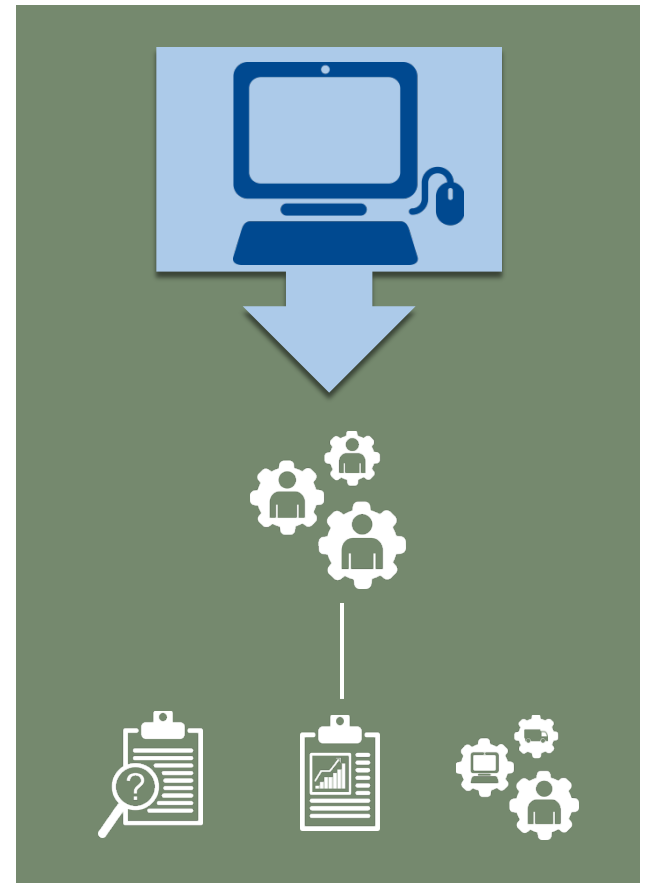
Project-supported capacity building and technical assistance efforts instilled data-driven quantification practices with increased country ownership.



Over the years, the project has supported annual quantification exercises and routine pipeline monitoring with the MOHCDGEC and its various programs, including the NMCP and the Reproductive and Child Health Services (RHCS). As quantification exercises increased and improved in accuracy, the MOHCDGEC staff and project advisors increasingly adopted software tools, including Quantimed and PipeLine, to assist with forecasting and supply planning. Methodologies expanded from the use of demographic data to include the use of consumption and service data, where most technically appropriate. Advisors from the project increased the MOHCDGEC staff capacity to understand the nuances and intricacies involved with using data from multiple sources to carry out different forecasting methodologies during a quantification exercise. The project successfully trained and built capacity for 36 key staff members (27 from MOHCDGEC and 9 from ZMOH).

Project support to the demand and supply planning efforts resulted in institutional sustainability for the various stages of the quantification processes. The MOHCDGEC programs now take the lead responsibilities for several steps in the annual exercises. Project-supported quantifications involved donors and other implementing partners to coordinate efforts and mobilize resources for identified commodity requirements.

In addition to annual quantification exercises and updates, the project and SCMS worked with MOHCDGEC programs for routine supply planning, using PipeLine software to keep track of stock levels, commodity movement, and program needs. In collaboration with the MOHCDGEC logistics officer, staff from the project updated the PipeLine databases on a quarterly basis to respond to consumption trends. The project's work has streamlined the supply planning and forecasting processes through timely and complete quantification exercises.



## Advocacy

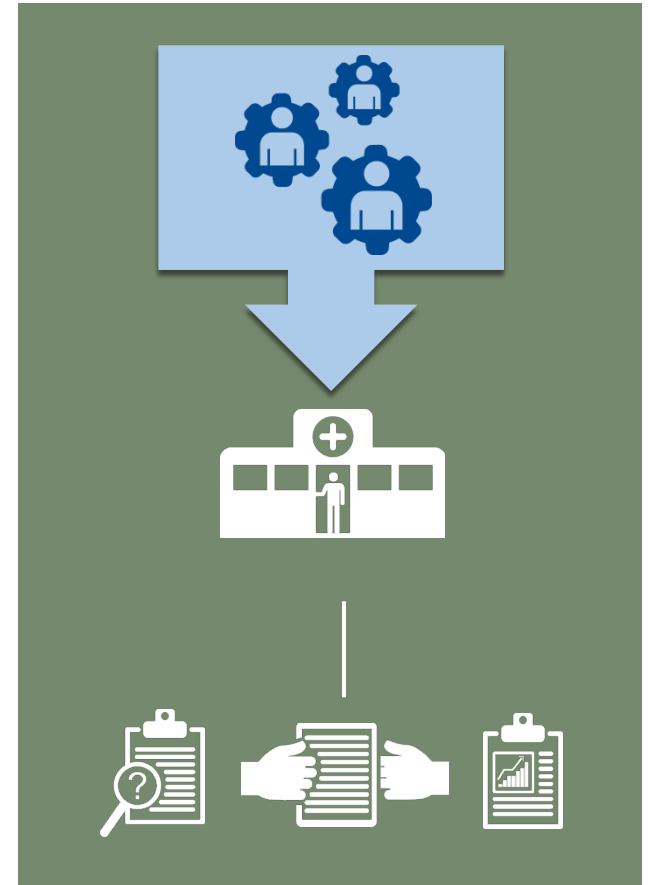
A toolkit for best practices in health commodities management and governance gave councils a platform for knowledge and best practices sharing.



Forums, working groups, and collaborative platforms give the pharmaceutical and supply chain sectors an environment for coordination and knowledge sharing across stakeholder groups. In the Pharmaceutical, Infrastructure, Food Safety Working Group the project provided the supply chain perspective to the group's work, specifically for financing, human resources, and PSU disbursement. Through this forum and other groups, the project built capacity in commodity security and stakeholder interest groups by facilitating the availability of key information and supply chain data.

One project-supported mechanism for equipping healthcare workers with best practices and tools is the *Toolkit for Best Practices in Medicines Management and Good Governance in Council Health Facilities*. Teams of MOHCDGEC and project staff visited councils with proven best practices; they carefully documented the processes, then created a toolkit to give other local-level officials and health

workers the procedures and framework to implement these best practices. This toolkit contains practices related to effectively verifying commodities received against stock records and dispensing records, implementing pooled procurement, and working with others to improve and coordinate delivery. Initial rollout included 10 councils, many of whom have used the toolkit to roll out new interventions, such as innovative funding schemes for operational purposes. During the first evaluation in Kyela and Same districts, the data reporting accuracy for the transfer from stockkeeping records to R&R forms increased from 37 to 67 percent and 51 to 74 percent, respectively. Additionally, Mkuranga saw a 160 percent increase in the human resource pool for health facilities following the toolkit implementation. Though currently limited to Big Results Now (BRN) regions, the toolkit will be rolled out to other districts in the future.





## 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; and 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 higher performance among public health personnel and, as a result, increased availability of contraceptives and other essential health products.

## In-Service Training In Supply Chain Management Principles

Built sustainable supply chain capacity and ownership of supply chain interventions through in-service training exercises.



The project built capacity among MOHCDGEC staff and other healthcare workers in nearly all the intervention areas, including different logistics systems; technical areas, such as quantification and transportation optimization; and tools for improving commodity security, such as the ILSGateway. By building local capacity and engaging local stakeholders, the project established country ownership of supply chain interventions.

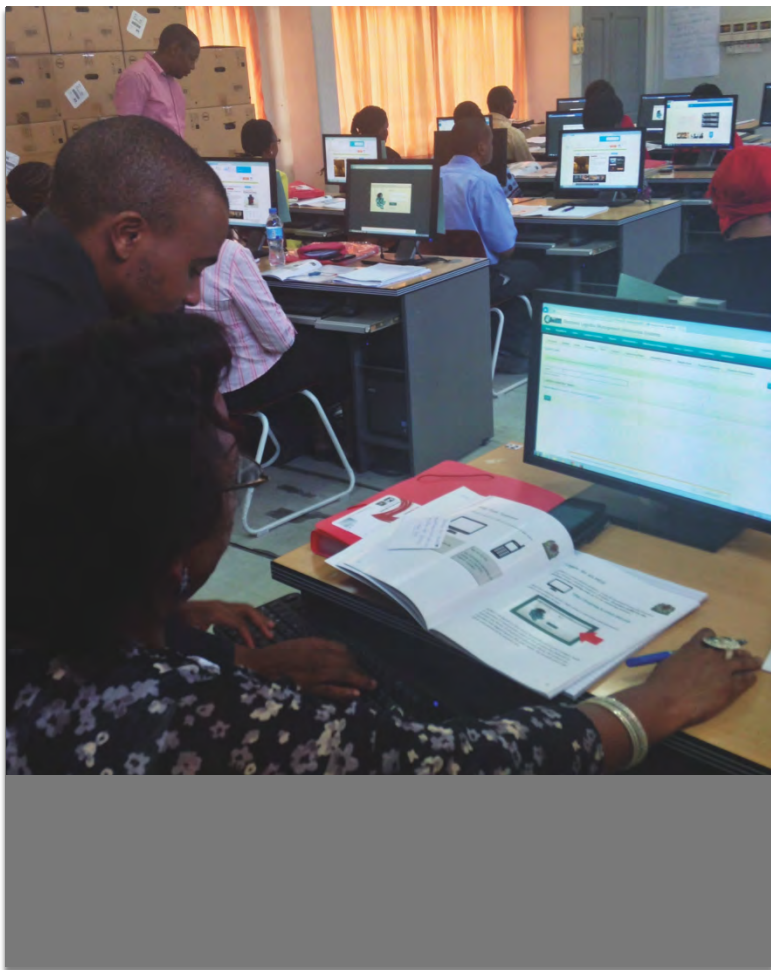
In-service training ensures that practicing supply chain workers continue to update their skills and implement best practices in their daily work. Training in technical areas, such as quantification, give supply chain workers critical, industry-standard skills in Quantimed, PipeLine, and other crucial tools for establishing and monitoring commodity needs for the country. At the zonal level, project staff trained zonal managers on LLamasoft's Supply Chain Guru and Transportation Guru software to optimize distribution routes and strategically plan deliveries to the health facility level.

Project-supported trainings across the various supply chain technical areas reached over 17,000 healthcare workers. In addition to capacitating healthcare workers in the numerous supply chain intervention areas, trainings also provide critical networking opportunities within the sector and provide a platform for sharing knowledge and best practices.



## Pre-Service Training in Supply Chain Management

Project-developed pre-service training curricula institutionalized supply chain skills and principles for future health care workers.



In 2012, following advocacy for the integration of a supply chain component into the curriculum, the project was invited to support the incorporation of a supply chain management course at the Muhimbili University of Health and Allied Sciences (MUHAS). During this workshop, the project supported participants in developing a curriculum and modules for each semester. Leveraging global supply chain lessons from across the project, the Tanzania program applied this knowledge to their specific country context.

In 2013, the project trained 18 program lecturers from both the bachelor of pharmacy and the pharmacy technician diploma programs, and began integrating supply chain lessons into these programs. This initiative produced a healthcare work force with supply chain management skills straight from school and ready to work in the country supply chains.

Students in these programs, who previously had little exposure to supply chain concepts and training, now have supply chain modules built into their curricula and they are developing practical skills in areas such as stock and recordkeeping and commodity management. Since the curriculum launch, 106 students have completed their degrees and diplomas with pre-service training in supply chain management. MUHAS administrators report that staff supervising students during practical portions of their training are finding them better equipped and well qualified to perform their duties.

Pre-service training (PST) provides a more cost-effective capacity building solution for the supply chain workforce, compared to on-the-job and in-service trainings. These investments early in the students' careers give them critical supply chain skills during their schooling and remove the need for disruptions to work schedules and training costs that are part of other training approaches.

## Logistics Management Unit

LMU institutionalized supply chain management in the GOT and empowered ownership of critical supply chain functions.



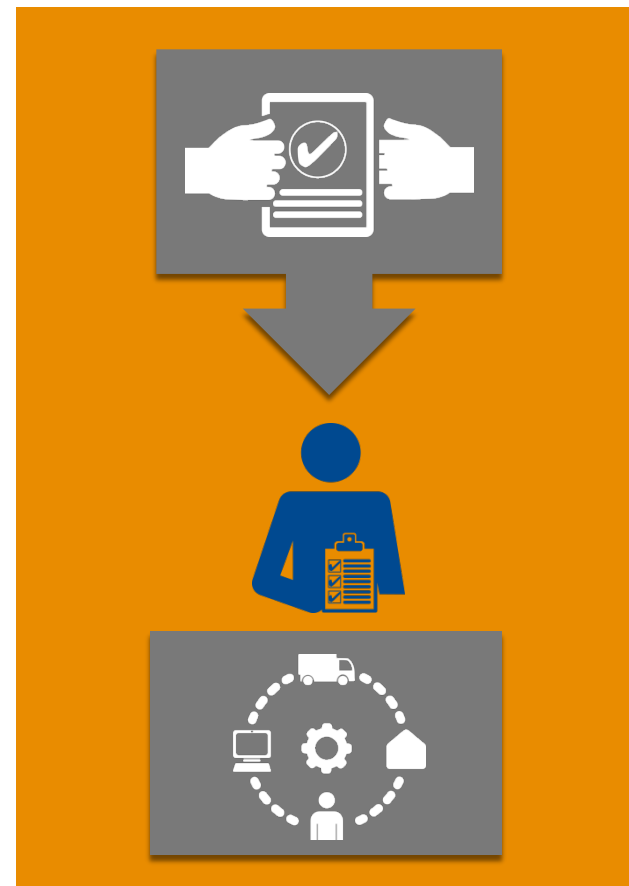
In collaboration with the MOHCDGEC, the project and SCMS supported the implementation of a LMU in Tanzania; a management structure that coordinates logistics management activities of different commodity categories under one unit; ensuring sustainability of the numerous supply chain interventions implemented during the past 10 years.

LMU staff provided routine supportive supervision visits to the health facility level, monitored commodity management practices and storage conditions, and suggested corrective actions through on-the-job training. The project also worked with LMU staff to facilitate redistribution of medicines to health facilities that needed them. From December 2014 to July 2015, the LMU performed 51 redistributions of antimalarials and essential medicines, valued at \$214,259. Centrally available logistics data allows the LMU and PSU to make important, strategic supply chain decisions to mitigate stockouts and understocks at the facility level. Data availability aids supply chain

leaders in their decisionmaking and builds leadership capacity in the LMU.

Strategically, the project collaborated with Tanzania's MOHCDGEC to elevate the former Pharmaceutical Services Sector (PSS) to a directorate by developing a total of 97 job listings, including 60 positions within the LMU. In May 2015, the PSS was formally instituted as a directorate and was named the PSU. The LMU's ownership of all supply chain functions includes logistics data management, quantification, monitoring and evaluation, coordination and collaboration, supply chain intervention planning, training and capacity building, and supervision.

In June 2015, based on best practice and lessons learned from LMU implementation in Mainland Tanzania, the project, with the Zanzibar MOH and the CMS, formed a technical working group to implement an LMU in Zanzibar. The MOH has recruited a 14-member team to coordinate and implement supply chain activities in Zanzibar.





# The Way Forward

# The Way Forward

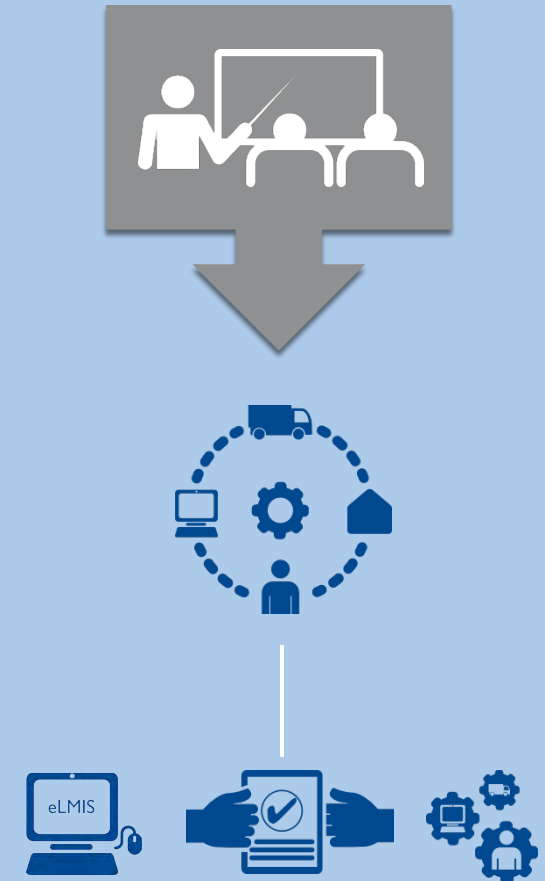


While the project has created a sustainable path to the skills and knowledge development of healthcare workers, there is a need for more aggressive interventions that will source a bigger pool of healthcare cadres to perform commodity management activities in the country. Supply chain PST will need to expand from MUHAS to other institutions and degree programs to increase the available healthcare workforce with supply chain skills.

As use of the eLMIS expands and data visibility improves across the supply chain, decisionmakers need to continue using the data generated from the technologies at their disposal for informed decisionmaking and action. Building on these systems to implement the facility editions of the eLMIS, and expanding monitoring and evaluation through data quality assessments, will be a priority area in the future.

The project's interventions, resulting in better coordination through LMU and automation of R&Rs through the eLMIS, lessened the foreseen negative impact of the shift to a direct delivery model for MSD distribution.

As the central hub for supply chain activities, the LMU must continue demonstrating the importance of supply chains to the overall health system by leveraging data to support its management practices and driving sustainability for essential supply chain services.





# Additional Resources

---

# Acronyms

ACT	antiretroviral therapy	PMTCT	prevention of mother-to-child transmission
BRN	Big Results Now	PSS	Pharmaceutical Services Sector
CMS	Central Medical Store	PST	pre-service training
CYP	couple-years of protection	PSU	Pharmaceutical Services Unit
eLMIS	electronic logistics management information system	RCHS	Reproductive and Child Health Section
ERP	Enterprise Resource Planning	RDT	rapid diagnostic test
EUV	End-Use verification	R&R	Request & Requisition
GOT	Government of Tanzania	SCMS	Supply Chain Management Systems
JSI	John Snow, Inc.	SDP	service delivery point
LLIN	long-lasting insecticide-treated bed nets	SP	sulfadoxine-pyrimethamine
LMD	Logistics Management Division	TDHS	Tanzania Demographic and Health Survey
LMU	logistics management unit	U.S.	United States
LMIS	logistics management information system	ZILS	Zanzibar Integrated Logistics System
MOH	Ministry of Health	ZMOH	Zanzibar Ministry of Health
MOHCDGEC	Ministry of Health, Community Development, Gender, Elderly, and Children		
MSD	Medical Stores Department		
MUHAS	Muhimbili University of Health and Allied Sciences		
NMCP	National Malaria Control Program		
NPAP	National Pharmaceutical Sector Action Plan		

---

## Reference

National Bureau of Statistics (NBS) [Tanzania] and ICF Macro. 2011. *Tanzania Demographic and Health Survey 2010*. Dar es Salaam, Tanzania: NBS and ICF Macro.

---

## Further Reading

Brian Serumaga, Noela Kisoka, Amani Maro, Paul Forbes, Vaishalee Patel and Azaria Bakari. 2013. Zanzibar: Strategic Review of the National Supply Chain for Health Commodities.

Jankowski, Karlan. 2015. Delivering to the Last Mile in Tanzania. Arlington, Va.: USAID | DELIVER PROJECT, Task Order 4.

Motomoke Eomba and Ignatio Chiyaka, 2013. Pre-Service (PST for Supply Chain Management of Health Commodities in Tanzania. Arlington, Va.: USAID | DELIVER PROJECT, Task Order 4, and Supply Chain Management System (SCMS).

Printz, Naomi, Johnnie Amenyah, Brian Serumaga, and Dirk Van Wyk. 2013. Tanzania: Strategic Review of the National Supply Chain for Health Commodities.

Supply Chain Management System; USAID | DELIVER PROJECT , Task Order 4; USAID | DELIVER PROJECT Task Order 7. 2016. Health Logistics in Tanzania: Timeline of Accomplishments for Supply Chain Interventions. Arlington VA: Supply Chain Management System; USAID | DELIVER PROJECT, Task Order 4; USAID | DELIVER PROJECT, Task Order 7.

Supply Chain Management System; USAID | DELIVER PROJECT , Task Order 4; USAID | DELIVER PROJECT Task Order 7. 2016. Strengthening the Supply Chain in Zanzibar to Save Lives: Supply Chain Accomplishments. Arlington VA: Supply Chain Management System; USAID | DELIVER PROJECT, Task Order 4; USAID | DELIVER PROJECT, Task Order 7.

USAID | DELIVER PROJECT, Task Order 4 and Supply Chain Management System, 2012 Iramba Health Supply Chain Goes from Failing to Model Supply Chain System, Arlington, Va., USAID | DELIVER PROJECT, Task Order 4 and Supply Chain Management System,

USAID | DELIVER PROJECT, Task Order 4 and Task Order 7, 2012. The ILSGateway: Mobile Phones Improve Data Visibility and Lead to Better Commodity Availability in Tanzania, Arlington, Va., USAID | DELIVER PROJECT, Task Order 4 and Task Order 7

USAID | DELIVER PROJECT, Task Order 4, 2015. Using an Hands- on Approach for Direct Delivery, Arlington, VA., USAID | DELIVER PROJECT, Task Order 4

USAID | DELIVER PROJECT, Task Order 4 and Supply Chain Management System, 2015 Changing Mindsets, Adapting to Technology in Tanzania. Arlington, Va.: USAID | DELIVER PROJECT, Task Order 4 and Supply Chain Management System

USAID | DELIVER PROJECT, Task Order 4 and Task Order 7 and Supply Chain Management System, 2015. Tanzania Graduates First Class of Public Health Supply Chain Managers. Arlington, Va.: USAID DELIVER PROJECT, Task Order 4 and Task Order 7 and Supply Chain Management System



---

## Further Reading

USAID | DELIVER PROJECT, Task Order 4 and Supply Chain Management System, 2012. Electronic Logistics Management Information System (eLMIS) Project Charter, Arlington, Va., USAID | DELIVER PROJECT, Task Order 4 and Supply Chain Management System,

USAID | DELIVER PROJECT, Task Order 4 and Task Order 7 and Supply Chain Management System, 2014. Logistics Management Unit (LMU) Project Charter - Tanzania Mainland, Arlington, Va., USAID | DELIVER PROJECT, Task Order 4 and Task Order 7 and Supply Chain Management System.

USAID | DELIVER PROJECT, Task Order 4. 2015. Tanzania: Human Resource Capacity Assessment in Public Health Supply Chain Management. Arlington, Va.: USAID | DELIVER PROJECT, Task Order 4.

USAID | DELIVER PROJECT, Task Order 4. 2015. Zanzibar: Assessment of Human Resource Capacity in Public Health Supply Chain Management. Arlington, Va.: USAID | DELIVER PROJECT, Task Order 4.



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)