USAID | DELIVER PROJECT
Final Country Report
Zimbabwe
USAID | DELIVER PROJECT, Task Order 4
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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-00-06-0007-00, 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; PHD International (a division of the RTT Group); PSI; 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
Through its interventions under Task Orders 4 and 7 (and previously under the original DELIVER Project Task Order 1), the USAID | DELIVER PROJECT in Zimbabwe has contributed to improvements in supply chain management and human capacity development, both of which ultimately lead to better product availability and better client service.

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

Cover photo: Health worker and team leader verify and enter data for the quarterly Delivery Team-Topping Up re-supply run at Tsungubvi Polyclinic, Bindura, Zimbabwe. June 2014. Photographer: Gregory Roche, JSI.

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>01</th>
<th>Project Overview and Context</th>
<th>02</th>
<th>Technical Assistance</th>
<th>03</th>
<th>The Way Forward</th>
<th>04</th>
<th>Additional Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Project Overview</td>
<td></td>
<td>Technical Assistance</td>
<td></td>
<td>The Way Forward</td>
<td></td>
<td>Acronyms</td>
</tr>
<tr>
<td></td>
<td>Investment in Commodity Support and Technical Assistance</td>
<td></td>
<td>Strengthen Logistics System Performance</td>
<td></td>
<td>Build Sustainable Capacity</td>
<td></td>
<td>Further Reading</td>
</tr>
<tr>
<td></td>
<td>HIV and AIDS</td>
<td></td>
<td>Increase National Commitment to Commodity Security</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Malaria</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Project Overview and Context
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.

Since 2000, Zimbabwe has been in the midst of an economic collapse. The implications have been devastating for the public health care system, with hyperinflation having a detrimental effect on program capacities. As a result of unemployment hovering near 95 percent, an exodus of the health workforce has occurred along with the collapse of health infrastructure. The effects of the downturn have been most severe in rural areas, where many vacant positions have remained unfilled, and rotations through posts are frequent.

These factors contribute to disruptions in the public health supply chain that undermine Zimbabwe’s ability to meet the health needs of its people. Within this context, the USAID | DELIVER PROJECT, in collaboration with their in-country partners, have used best practices and innovative approaches to develop and implement responsive supply chain solutions, procure and ship health commodities, and build sustained capacity.

Despite the ongoing challenges of operating in this fragile environment, the project’s investments have increased access to a range of high-quality essential health commodities at the last mile.
Investment in Commodity Support and Technical Assistance

Since 2000, the public health care system in Zimbabwe has operated in an economic environment rife with hyperinflation and high unemployment. These factors have significantly contributed to specific system failures, causing disruptions in the routine supply of essential medicines and undermining the government’s ability to achieve its health goals.

The USAID | DELIVER PROJECT and partners helped the Government of Zimbabwe (GOZ) fill critical gaps through commodity procurement and technical assistance in support of critical supply chain functions.

Since 2006, the project, in collaboration with the Ministry of Health and Child Care (MOHCC), NatPharm, and other partners, has worked to strengthen public health supply chain management for supplies related to preventing mother-to-child transmission (PMTCT) of HIV, tuberculosis (TB) drugs and laboratory supplies, malaria drugs, rapid diagnostics tests (RDTs), male circumcision commodities, and primary health care packages (PHCPs). The following activities are examples of the project’s work in Zimbabwe:

- The project supported Delivery Team Topping Up (DTTU), a supply chain system based on vendor-managed inventory that delivers condoms, contraceptives, HIV rapid test kits, antiretroviral drugs for PMTCT, emerging infectious disease bundles, and CD4 point of care (POC) reagents and consumables to all ten provinces across the country on a quarterly basis.

- As a member of key technical working groups, the project helped improve coordination and collaboration among multi-sector stakeholders.

- As the country emerges from its fragile state, the project supported the integration of numerous vertical distribution systems into a single “assisted ordering” system known as the Zimbabwe Assisted Pull System (ZAPS). ZAPS was piloted in Manicaland and will be scaled nationally based on a project-supported evaluation.

- The project created and automated logistics management information systems (LMIS) to improve visibility and use of key data. For malaria, the project has supplemented this information with data from end-use verification.
HIV and AIDS

More than 1.6 million people in Zimbabwe are living with HIV.

Without a reliable supply of condoms and other HIV prevention commodities available where and when they are needed, the national HIV and AIDS program cannot achieve its goal of reducing morbidity and mortality due to AIDS. Yet, historically, the distribution system for these commodities suffered from insufficient resources and underreporting to the point where it was non-functional.

Since 2004, the project has worked with the Zimbabwe National Family Planning Council (ZNFPC) and partners in response to these challenges. Most notably, the project and its predecessor adopted the DTTU system, an approach used in the commercial sector—notably the soft drink industry. This system routinely supplies all public sector health facilities with male and female condoms, along with other commodities for HIV prevention including HIV rapid tests, ARVs for PMTCT, CD4 POC reagents, early infant diagnosis bundles, and consumables. This is achieved by sending delivery trucks directly to facilities to collect stock data and “top up” supplies. Over the years, the project provided technical assistance and operational support for the DTTU system (re)design; developed standard operating procedures (SOPs) and training curricula, and developed paper-based and automated logistics management information systems, and improved transport capacity. The project also improved MOHCC and ZNFPC’s capacity to manage the DTTU system.

In addition to strengthening systems for distribution and logistics LMIS, the project provided technical assistance and operational support in quantification, procurement of USG-funded condoms, storage, monitoring, support, supervision, and partner coordination.
Malaria

Malaria is the second-leading cause of death in Zimbabwe. To reduce malaria incidence and mortality, programs and interventions require strong supply chains.

In 2009, the project helped the MOHCC pilot the Zimbabwe Informed Push (ZIP) system to improve delivery of malaria commodities and collection of logistics data from public health facilities. That year, the project also supported an emergency response to accelerate Indoor Residual Spraying (IRS).

The project procured and delivered high-quality antimalarial medicines, RDTs, long-lasting insecticide-treated bed nets (LLINs), and technical assistance.

To improve commodity delivery at the last mile, the project helped the MOHCC redesign its system for supplying village health workers with artemisinin-based combination therapy (ACTs) and RDTs, and subcontracted private companies for transit, storage, and distribution of LLINs. These efforts contributed to significant reductions in malaria incidence over the years, with a decrease from 155 cases per 1,000 in 2003, to 22 cases per 1,000 in 2012.

USAID | DELIVER PROJECT

has procured commodities for Zimbabwe to

- **Treat 5 million** malaria cases with ACTs
- **Test 8.1 million** suspected malaria cases with RDTs
- **Prevent malaria in pregnancy with 8.1 million tablets of SP**
- **Protect against malaria with 3 million LLINs**
Technical Assistance Overview

Delivering high-quality health care to patients and clients requires that health facilities and dispensaries have a full supply of medicines and other health products. This calls for 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 Zimbabwe, these interventions include—

**Strengthen Logistics System Performance**
- Apply Commercial-sector Practices to Improve Public Health Supply Chains
- Develop Systems to Distribute Commodities
- Move from Vertical to Integrated Systems
- Create and Automate LMIS to Improve Data Visibility and Use

**Increase National Commitment to Commodity Security**
- Improve Multi-stakeholder Coordination to Reduce Gaps and Maximize Impact

**Build Sustainable Capacity**
- Strengthen Forecasting, Supply Planning, and Procurement.
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 a 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.
Apply Commercial-sector Practices to Improve Public Health Supply Chains

With the project’s help, the Delivery Team Topping Up system (DTTU) increased product availability to the point where delivery coverage is now greater than 98 percent.

The economic collapse and resulting breakdown of Zimbabwe’s infrastructure led to supply chain failures, and ultimately compromised the country’s ability to ensure commodity availability at the last mile. In response, the project and its predecessors helped the ZNFPC design, monitor, and evaluate the Delivery Team Topping Up system. Despite the challenging operating environment, the DTTU system has increased product availability by guaranteeing direct delivery to health facilities and creating systematic accountability at all points of commodity procurement, delivery, and receipt.

More than eleven years ago, Zimbabwe’s DTTU system made its first delivery of supplies to health facilities. The system has proven to be one of the most effective and robust supply chain solutions, maintaining high delivery coverage and low stockout rates at scale.

Today, DTTU delivery coverage is >98 percent. Stockouts of all condoms at health facilities have been below 5 percent, down from an average of 20 percent before DTTU implementation. The DTTU system reduces the burden on health care providers because it gives them more time to spend with clients, and decreases the time it takes to get emergency supplies during stockouts. It also ensures that reliable data is available to management whenever needed.

Condom Stockout Rate
Strengthen Logistics System Performance

Develop Systems to Distribute Commodities

The project helped increase delivery coverage and reduce stockout rates to less than 5 percent for malaria and TB drugs by piloting the ZIP project and conducting end-use verification surveys.

When Zimbabwe’s economy and infrastructure collapsed, deliveries of malaria and TB commodities deteriorated to the point that all the health facilities had shortages of medicines. To alleviate the situation, the project helped Zimbabwe’s Ministry of Health and Child Welfare pilot the ZIP project to improve delivery of malaria and TB drugs to public health facilities.

Before the ZIP pilot was launched in Midlands Province in 2009, stockout rates were between 30 and 100 percent for all TB and malaria commodities. The ZIP project increased delivery coverage to more than 90 percent of facilities and reduced stockout rates to less than 5 percent.

After the success of the pilot, the ZIP system was introduced in all ten of Zimbabwe’s provinces. People across the country now benefit from the increased availability of malaria and TB drugs.

The project began conducting end-use verification (EUV) surveys in 2012 to strengthen accountability and improve data visibility of malaria products. The EUV provided rapid, real-time assessments of the availability of antimalarial drugs at the facility level. The surveys also assisted in verifying end-user receipt of malaria commodities and identifying areas of strength and weakness in the supply chain and in malaria case management practices. The EUV data informed redistribution of malaria commodities in line with epidemiological and consumption trends. The EUV data was also used to inform changes to the distribution system. Information on training needs and gaps was used to advocate for additional resources to train staff in malaria case management and stock management. The project also procured and subcontracted for the storage and distribution of LLINs to achieve universal coverage in the 30 targeted high-malaria burden districts.

Stockout Rate – Atermeth/Lumefantrine

<table>
<thead>
<tr>
<th>Month</th>
<th>Stockout Rate</th>
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<tbody>
<tr>
<td>June-12 (n=44)</td>
<td>14%</td>
</tr>
<tr>
<td>Sep-12 (n=40)</td>
<td>0%</td>
</tr>
<tr>
<td>Nov-12 (n=40)</td>
<td>0%</td>
</tr>
<tr>
<td>Mar-13 (n=39)</td>
<td>10%</td>
</tr>
<tr>
<td>Jul-13 (n=38)</td>
<td>3%</td>
</tr>
<tr>
<td>Oct-13 (n=37)</td>
<td>3%</td>
</tr>
<tr>
<td>Jan-14 (n=40)</td>
<td>5%</td>
</tr>
<tr>
<td>Apr-14 (n=28)</td>
<td>4%</td>
</tr>
<tr>
<td>Jul-14 (n=40)</td>
<td>0%</td>
</tr>
<tr>
<td>Oct-14 (n=37)</td>
<td>3%</td>
</tr>
<tr>
<td>Jan-15 (n=37)</td>
<td>0%</td>
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Move from Vertical to Integrated Systems

The project’s support of numerous distribution systems enabled each to respond to unique structures and program commodity needs.

Because of the challenges of operating in a fragile state, donors and partners focused less on sustainable solutions and more on the immediate needs of ensuring commodity availability. The project supported numerous distribution systems, each of which responded to unique structures and program commodity needs. These systems were managed separately, using different transport, warehousing, and management information systems and drawing on different funding streams.

As Zimbabwe became more stable, stakeholders were interested in shifting primary responsibility for supply chain funding and management from international donors and technical assistance agencies to Zimbabwe’s government. The MOHCC Directorate of Pharmacy Services believed that a single, unified system would be simpler to manage, cost less, and would produce similar or higher levels of performance compared to the existing separately managed systems.

In 2013, with project support, stakeholders designed and piloted the Zimbabwe Assisted Pull System (ZAPS) in Manicaland province. The ZAPS consolidated management of four existing health commodity distribution systems for the primary health care facility level: DTTU, Zimbabwe Informed Push/Primary Health Care Package (ZIP/PHCP), Zimbabwe ARV Distribution System (ZADS), and Essential Medicines Pull System.

Prior to rolling out nationally, the project supported an evaluation to compare the performance, costs, and efficiency of the ZAPS with these existing distribution systems. The ZAPS pilot maintained supply chain performance and did so at a lower overall cost and more efficiently than the four existing systems. However, there was some variability in performance across product categories.

These findings are informing decisions about how best to implement the ZAPS elsewhere in Zimbabwe.
Strengthen Logistics System Performance

Create and Automate LMIS to Improve Data Visibility and Use

Through technical assistance in system upgrades, database management, data analysis, and reporting, the project contributed to more strategic decisions on forecasts, supply plans, and allocation of resources.

Before 2003, there was no LMIS to track essential logistics data for condoms, malaria, TB, or essential medicines. The project collaborated with ZNFPC to develop a paper-based and then an automated LMIS for condoms and other HIV-prevention commodities. Paper-based systems were developed and deployed during the initial rollout of the DTTU system in 2003. Automation began in 2007 and completed in 2008 with the AutoDRV software, which collects consumption, stock on hand, losses, and adjustments data for all DTTU products on laptops during deliveries.

In 2009, the Global Fund to Fight AIDS, Tuberculosis and Malaria set collecting consumption data as a condition for further funding. With NatPharm, UNICEF, and Westchase Consultants, the project helped the MOHCC adapt AutoDRV software to collect malaria commodities logistics data. The project assisted the ZNFPC and MOHCC in deploying the software to all provinces by 2009 for condoms, and by 2010 for malaria, TB, and essential medicines.

In the DTTU and ZIP/PCHP systems, reporting is tied directly to delivery. Investments in the LMIS have improved delivery, data reporting timeliness, and data quality for both systems. Logistics data collection is automated through the AutoDRV, which, compared to the paper-based forms, has minimized data encoding errors and improved data quality.

The TOP UP software, which hosts a central electronic LMIS repository, was also developed and implemented to automatically sync, aggregate, analyze, and report data from the AutoDRV software. The TOP UP software was also adapted for malaria commodities in line with changes to the AutoDRV software and to sit on a Navision (NatPharm ERP) platform.

The ministry is now able to run critical reports such as reporting and delivery coverage, quantity of products distributed, average monthly consumption, stockout, and loss rates.

The database produces aggregated national reports and can disaggregate by province or district. Information from the electronic LMIS is used for routine decisionmaking (such as stock redistribution), and for more strategic decisions on forecasts, supply plans, and allocation of resources.

The project provided technical assistance in systems upgrades, database management, data analysis, and reporting. Under subcontract from the project, Westchase consultants provided software maintenance support to ZNFPC, MOHCC, and NatPharm.
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.
Improve Multi-stakeholder Coordination to Reduce Gaps and Maximize Impact

Spearheaded by the project, multi-sector coordination and collaboration between stakeholders helped reduce gaps and overlap in supply chain management.

Over the past ten years, the project supported efforts to improve multi-sector coordination and collaboration between stakeholders. Key partners and coordinating bodies included MOHCC, ZNFPC, USAID, DFID, Crown Agents Zimbabwe, PSI, PSZ, UNFPA, and the MoHCC-led Medicines and Medical Supplies Coordination Team, Procurement and Supply Management Committee, Global Fund Country Coordinating Mechanism, and malaria case management, vector control, monitoring and evaluation, and behavior change communication committees.

These partnerships helped reduce gaps and overlap. Regular meetings with partners were forums to:

- Share strategic and annual plans, priority areas, program targets and funding commitments
- Discuss routine stock status reports, commodity forecasts, supply plans, status of shipments
- Identify funding gaps and mobilize resources
- Resolve implementation challenges.
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.
Strengthen Forecasting, Supply Planning, and Procurement

By improving counterpart capacity in forecasting, supply planning, and pipeline monitoring, product availability increased. Forecasting, supply planning, and pipeline monitoring contribute to improved product availability. The project has built counterpart capacity in these functions for both HIV and malaria commodities since 2003 and 2010 respectively.

The project developed ZNFPC, MOHCC, and partners’ capacity in quantification. As a result, their staff are able to—

- Use various methodologies and tools, including PipeLine and Quantimed, for forecasting and supply planning
- Conduct and review national forecasts and supply plans for condoms and malaria commodities
- Identify funding gaps and mobilize resources to fill them.
The Way Forward
The Way Forward

Because of ongoing challenges in the operating environment, poor infrastructure, and limited fiscal commitment from the Government of Zimbabwe, there is continued need for support of the DTTU and ZIP/PHCP systems, including LMIS, delivery truck and monitoring vehicle maintenance, and training for team leaders. Support for condom storage and repackaging is needed until the GOZ avails funding and/or storage capacity to sustain these activities. Fortunately, MOHCC and ZNFPC personnel largely have the capacity to manage the technical aspects of these functions.

The project and its successor are expected to continue to provide support for the nationwide rollout of ZAPS to the primary health care level, and the DTTU, ZIP/PHCP, and ZADS to the district level and higher.
Acronyms

ACT  artemisinin-based combination therapy
DFID  Department for International Development (U.K.)
DTTU  Delivery Team Topping Up
GOZ  Government of Zimbabwe
LMIS  logistics management information system
MOHCC  Ministry of Health and Child Care
PHCP  primary health care package
PMTCT  prevention of mother-to-child transmission
POC  point of care
PSZ  Population Services Zimbabwe
RDT  rapid diagnostic test
TB  tuberculosis
UNFPA  United Nations Population Fund
ZAPS  Zimbabwe Assisted Pull System
ZADS  Zimbabwe ARV Distribution System
ZIP  Zimbabwe Informed Push
ZNFPC  Zimbabwe National Family Planning Council
Further Reading


For more information, please visit deliver.jsi.com.