



# USAID | DELIVER PROJECT

## Logistics Brief

# Zambia: Assessment Recommends Storage Improvements for Better Commodity Security



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The USAID | DELIVER PROJECT contracted with local architecture and engineering firms to conduct the storage assessments. Ministry of Health representatives provided quick access to commodity storage areas and key staff during the assessment.

**Today, the MOH can plan better and communicate more effectively with potential donors about important infrastructure investments that will lead to improved commodity security and greater access to drugs.**

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In late 2010, the USAID | DELIVER PROJECT, with the Zambian Ministry of Health (MOH), successfully completed an assessment of storage capacity in each of Zambia's nine provinces, which included 58 district medical offices (DMOs) and 258 public health facilities. The detailed recommendations from the study include how to bring each facility's bulk laboratory and pharmaceutical storage up to established national standards and a detailed list of the financial resources required to make these improvements. Today, the MOH can plan better and communicate more effectively with potential donors about important infrastructure investments that will lead to improved commodity security and greater access to drugs.

The project began by looking at the existing storage capacity and how it compared to national standards. We prepared an assessment report for each facility visited: including an in-depth summary of their storage space; an estimate of floor space and shelving space required; a list of how each facility complies with established national guidelines; a summary of the infrastructure (condition of ceilings, floors, doors, etc.); and written recommendations. The team used two sets of standards for the assessments: the *Ministry of Health Storage Guidelines* and established recommendations for floor space and shelving space needed to maintain three months of stock.

Each report includes (1) computer-aided design drawings of the storage areas as they are and as they would look if recommendations were followed; (2) a report indicating the current market rate for implementing the recommendations; (3) copies of assessment forms; and (4) pictures of the facility storage areas.

The project assessed a large sample of different types of ministry facilities (see table 1). Depending on the type of facility setting—rural or urban—the results were significant. Following is a brief report of findings for pharmaceutical, laboratory, and DMO storage areas, including an analysis of the financial implications if the country follows the recommendations.

**Table I. Ministry of Health Facilities by the Numbers**

Facility Type		Qty	Assessed	%
Level 3 Hospital		5	4	80
Level 2 Hospital		13	3	23
Level 1 Hospital		39	9	23
Health Centres	Rural HC	930	141	15
	Urban HC	206	77	37
Health Posts		161	24	15
District Medical Office		72	58	81
<b>Total</b>		<b>1430</b>	<b>316</b>	<b>22</b>

## Pharmaceutical Storage Capacity in Public Health Facilities

Forty-six percent of the 258 facilities assessed did not meet the recommended space guidelines for three months of stock. Rural health centers and health posts met the guidelines more often than urban centers. A large percentage of the facilities—at least two-thirds—are in urban health centers. One positive finding—83 percent of the assessed facilities have enough existing space within their facility to meet their storage needs. To renovate, relocate, or internally expand the existing storage areas in the 214 facilities would cost an estimated K 11.7 billion or U.S.\$2.5 million.

The cost for improving the facilities’ infrastructure include—

- ceilings to help control the internal temperatures of storage areas in 79 facilities, mainly rural health centers.
- new fire safety equipment for 88 facilities; fire extinguishers in 49 facilities have expired and must be serviced or replaced.
- cold storage equipment, refrigerators or freezers, are required for 51 facilities.

It would, however, cost approximately K 6 billion or \$1.3 million to construct 44 new storage facilities. Almost half the facilities (19) are urban health centers located in Lusaka district.

Comparing the findings of facilities assessed to the total facilities nationwide, an estimated K 82 billion or \$17.9 million is needed to standardize all ministry health facilities.

## Laboratory Storage Capacity in Public Health Facilities

The results from the assessments for the 48 laboratories are alarming. Only 26 laboratories have dedicated laboratory storage space—but these 26 have just 20 percent of the storage space size recommendations. Because most laboratories are in urban settings; the assessment teams noted that these facilities do not have additional space available. They recommended K 2.8 billion or \$601,000 to construct 20 new laboratory storage areas. To bring all 249 laboratories in Zambia up to standard would cost almost K 22.5 billion or \$5 million. While all the laboratories require similar infrastructure, a more urgent need is to provide appropriate levels of security.

## Bulk Storage in District Management Offices

The 72 DMOs in Zambia need significant storage space because they receive and distribute health commodities ordered by the facilities in their respective districts. However, only 50 percent have dedicated storage space. When assessment teams visited these sites, they saw that, like urban health centers, most DMOs do not have available storage space. The team recommended the construction of 17 sites for new storage areas (K 3.1 billion or \$670,000). Nineteen sites had on-site storage that met or exceeded storage space guidelines; they require shelving and infrastructural enhancements (K 2.4 billion or \$527,000).



By investing in shelving, a facility can quickly increase its storage capacity. Results show that about K3 billion or \$648,000 would improve 172 facilities, including Matebo Rural Health Centre, shown above. Instantly, they would have enough storage capacity for three months of stock. By purchasing metal shelving in bulk for all the facilities, the ministry and potential donors would see substantial savings.

Thirty-six DMOs store health commodities off-site at nearby hospitals or at larger health facilities. The USAID | DELIVER PROJECT staff visited these facilities; we found that 28 have land available for new storage facilities, but do not have existing infrastructure available. The team worked with respective DMO staff to identify locations where additional storage space could be constructed. The U.S. Government-funded Supply Chain Management System project is now using some of these recommendations to place prefabricated storage units at DMOs. At current

market rates, 28 prefabricated storage units could be purchased and installed for about K 6.7 billion or \$1.5 million. To construct permanent structures would cost \$2.1 million.

Even though the infrastructure at DMOs is usually better than at service delivery points, the team still strongly recommended that more air conditioners be installed in the bulk storage areas. Most DMOs have reliable electricity and can maintain an appropriate temperature, which will ensure that products are stored under the right conditions.

## Funding Required to Address Storage Capacity Needs in Zambia

Contracted teams assessed 258 health facilities, 48 laboratories, and 36 DMOs. Their recommendations include detailed cost estimates for a total of K27.4 billion or \$6 million. Using this figure for the number of different sites nationally, an estimated K125.5 billion or \$27.3 million is needed to standardize the country's storage areas.

All of the assessment reports are available on a searchable DVD. For more information, please contact [askdeliver@jsi.com](mailto:askdeliver@jsi.com).

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The authors' views expressed in this publication do not necessarily reflect the views of the U.S. Agency for International Development or the United States Government.

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