

Warehouse Management System Assessment for the Philippines' Department of Health

BACKGROUND

The Logistics Management Division (LMD) operates the central warehouses of the Philippines' Department of Health (DOH), which cater to the medicines, nutritional products, and other health commodities of at least 15 DOH programs, including the Family Planning and National Tuberculosis programs.

The 12 goals of the Philippine Health Agenda to be met by 2022 include:

- Reduce out-of-pocket expenditures for health and for medicines for the poor
- Lower malnutrition rates
- Reverse the trend of HIV/AIDS and tuberculosis
- Attain zero unmet needs for modern family planning

Improving access to medicines and other health commodities would significantly contribute to achieving these key outcomes. However, the DOH recognizes weaknesses in the supply chain that lead to either stock-outs or overstocking of commodities at different levels. As one key focus area, there is a need to strengthen the warehousing of health products at the central and regional levels.

The goal of warehouse operations is to satisfy customers' needs and requirements while effectively utilizing space, equipment, and labor. Warehouse management refers to the monitoring, control, and optimization of warehouse and distribution systems. An efficient warehouse management system (WMS) is vital to ensuring that end users receive their much-needed pharmaceutical products in a timely manner while maintaining the products' quality, safety, and efficacy.



APPROACH

The US Agency for International Development-funded Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program is supporting the DOH in strengthening supply chain management, from leadership and governance to building capacity for implementation. SIAPS supported the DOH's WMS assessment at the central and regional levels. The purpose of this activity was:

1. To review the existing DOH WMS at the central and regional levels in terms of:
 - Space
 - Equipment
 - Tools
 - Processes
2. To identify key requirements for implementing a WMS that is tailored to central and regional contexts and needs

ACTIVITIES

To initiate the project, SIAPS facilitated planning meetings with the Office of Administration, Finance and Procurement (OAFP), Administrative Services (AS), and the LMD. SIAPS then facilitated coordination between central and Region VI warehouses, including third-party logistics providers (3PLs) and the cold chain warehouse at the Research Institute for Tropical Medicine (RITM) to conduct the assessment. The LMD, with support from SIAPS, performed the following activities:

- A desk review of standard operating procedures (SOPs), information flow processes, and guidelines and relevant documents
- Key informant interviews
- Warehouse visits to the LMD, 3PL (Nonpareil), Region VI, RITM, and city/community health facilities (Iloilo and Quezon City)
- Warehouse data analyses on storage capacity, age of inventory, and volume of commodities
- A review of technology/software technical specifications and functional assessments
- Organizing a planning workshop for the implementation of a WMS

KEY FINDINGS AND RECOMMENDATIONS

The LMD operates the DOH central warehouses, which are considered transit warehouses, meaning that items are in the process of transfer to regional, provincial, or rural health facilities. Those items are not picked for other orders. Additional warehousing, transportation, and brokerage services are outsourced to 3PLs. Regional and provincial offices operate intermediate transit warehouses and also outsource transportation.

Warehouses at the central and regional levels are operating at full capacity due to the estimated 100% increase in volume of inventory based on the comparison of 2016 and 2017 stock information. Corridors and offices not intended for storing medicines are currently being used as storage areas. The DOH recognizes the problem of mismatch between allocation quantities and end user requirements, which overburdens warehouse capacity at all levels. There are limitations to managing the distribution of stock by the LMD and consequently by regional and provincial offices as allocations are mandated through the programs. As an interim solution, the central level has provided authorization to regional warehouse to rent 1,000 sqm of space, but implementation has proven to be a challenge due to a lack of qualified 3PLs at the regional level.

SOPs for warehousing operations at different levels are available but may need updating. Opportunities for improving the implementation of these procedures are also available. Data collection through paper-based and electronic systems is burdensome in the current setup because of audit requirements and could be streamlined to avoid duplication. This will free up approximately 50% of staff time, which is needed to complete valuable warehouse operations, and will help address current stakeholder concerns regarding the shortage of human resources.



Space and location may be managed by updating location codes to include specific details such as rack numbers and levels, usage of a pallet system, and automation. The use of an electronic system for data management requires improvement of the overall IT infrastructure at all levels and capacity building for staff. Current IT systems under preliminary development or implementation for the DOH do not include functionalities for warehouse management, and based on a 14-parameter options analysis for integrated IT system solutions, developing new WMS software has been identified as having the most advantages. It will be expedient for the DOH to implement a WMS technology solution with multilocation capabilities to enable end-to-end commodity flow visibility, significantly mitigate financial waste, and improve accountability and transparency, leading to improved availability of commodities at service delivery points.

THE WAY FORWARD

Three major action areas were identified as part of the improvement plan developed by the LMD during the assistance following the validation and concurrence of the findings of the assessment:

- Establishing mechanisms to balance supply and demand of allocation at all levels
- Harmonizing processes and guidelines and capacity building for warehouse and distribution operations at all levels
- Automating these procedures and their corresponding data management

By adapting sustainable solutions based on a sound, reliable, and contextualized needs assessment, the DOH will ensure that the Philippines has access to the best possible medicines and treatment.