

# Assessment of Supply Chain Management Systems for Neglected Tropical Disease Drugs in Cameroon, Mali, Tanzania, and Uganda

Gabriel, Daniel;<sup>1</sup> Simon, Gregory;<sup>1</sup> Eghan, Kwesi<sup>1</sup>

Systems for Improved Access to Pharmaceuticals and Services Program, Management Sciences for Health, Arlington, VA, USA | Abstract No. 1077



## Introduction

The rapid expansion of neglected tropical diseases (NTD) control activities has brought about pharmaceutical and health system challenges. In most countries, the Ministry of Health (MoH) is responsible for the administration and operation of medicines supply and distribution and for providing district health administrations with funding from the national level. District health care responsibilities are to implement the national NTD policy, plan and manage mass drug administrations (MDAs), and oversee community administration of the NTD control programs. The purpose of assessing the pharmaceutical management and supply chain management (SCM) of NTD control programs for Cameroon, Mali, Tanzania, and Uganda was to learn about the programs, identify the gaps within their pharmaceutical management, and make recommendations for strengthening the system.

## Objectives

- Assess the management, distribution, and monitoring systems for NTD medicines from the central to community levels to identify any weaknesses.
- Assess the stock management system at the district and regional levels (actual versus theoretical stock) and identify the type and source of stock information transmitted between the national, regional, and district levels.
- Work with the national program coordinators to understand their medicine estimation methods as well as their annual needs requests (discussion and description of the ordering process).
- Propose pertinent solutions to correct the various weaknesses identified.
- Identify good practices to be reinforced harmonized between countries.

## Methods and Materials

Qualitative and quantitative information concerning NTD medicines availability and management were collected from questionnaires, structured assessment tools, interviews of health care workers, and direct observations at sample sites at regional, districts, and local health facilities. The questionnaires focused on availability of treatment guides, procurement, distribution, warehousing, and stock management practices, as well as adverse drug reactions (ADRs), disposal of expired/quality compromised products, and integration with relevant national services and structures.



Unused Mectizan is returned and its safety can not be assured for the next distribution.



Example of poor storage condition in a district warehouse.

Specific focus areas of the assessment included:

- Identify management gaps in pharmaceutical management of NTD medicines
  - Governance: Management framework, integration and coordination;
  - Service delivery: Procurement, distribution, and storage; MDAs; pharmacovigilance/ADR reporting and management; and availability of medicines
  - Human resources
  - Information management
- Make recommendations for pharmaceutical systems strengthening strategy in collaboration with in country partners relevant partners
- Use findings to serve as a baseline for measuring progress in collaboration

## Results

### Governance: Coordination/Integration

#### Cameroon

- There is no NTD secretariat/task force that coordinates NTD programming
- Stock inventory registers are often not up-to-date; this makes estimating real needs difficult at the district and community level.
- There is no specific person at central medical stores (CMS) delegated to manage NTD drugs (NTDD) and liaise with the NTD program managers

#### Mali

- Regional pharmacy personnel are not involved in NTDD management.
- There is lack of coordination between the regional NTD focal person and the regional pharmacist for NTDD management.

#### Tanzania

- Although programs indicate that they make accurate estimates, there are indications of stock-outs, over stocks, and expiries that indicate need for better quantification (forecasting and supply planning)

#### Uganda

- There are multiple sources of some NTDDs like albendazole and mebendazole going directly to the districts without the knowledge of NTD program or CMS. CMS procures albendazole, mebendazole, and praziquantel as part of its regular inventory. These medicines are used also in mass treatment campaigns, hence potential of mix-up in stock management of donated medicines for MDAs and for clinical use.
- There were instances where MDAs were planned when schools are on exams or on vacation, indicating lack of coordination.

### NTDD Information Management System

#### Cameroon

- There is no central data hub/pool for NTD management; each disease program prepares its own report.
- The NTD program and regional offices do not have inventory control cards for recording receipts and issues.

#### Mali

- Stock inventory registers are often not up-to-date, thus rendering the estimation of real needs difficult at the district and community levels.
- The NTD program has difficulty receiving information on actual quantity of NTDDs distributed, making forecasts of next round need a challenge.

#### Tanzania

- Stock inventory registers are often not up-to-date, thus rendering the estimation of real needs difficult at the district and community level.
- The NTD program has difficulty getting information on actual quantity of NTDDs distributed, making forecasts of future needs a challenge

### NTD Drugs Stock Management /Storage

#### Cameroon

- Only ivermectin and albendazole are stored by the national and regional medical stores.
- Praziquantel, mebendazole, and azithromycin are received by the MoH through WHO and sent directly to the districts.
- Some NTDDs coming through WHO are inappropriately stored at the offices of program managers and, occasionally at partner NGOs.

#### Mali

- NTDDs that stored at NTD program managers office and at NGO partners' facilities do not have any inventory control tools (stock/bin cards).
- Poor storage conditions exist at district and health facility stores—in most instances, the environment is not suitable to medicine storage and the facilities are and unorganized.



Example of good storage at a health facility



Example of good storage at a national level warehouse.

## Discussion

### Common Key Findings and Challenges

- There is delay in compiling and sending the report to the national NTD program by some districts and regions, making timely continuation application to the donors difficult
- CMS and other pharmaceutical management related staff are not oriented or trained in NTDs and NTDDs management.
- Some NTDDs are stored at program managers and at NGO partners' offices. The NTD program managers do not keep any inventory control tools (stock/bin cards) to actively monitor stock status.
- Although programs indicate that they make accurate estimates, there are indications of occasional stock-outs, over stocks, and expiries that indicate need for better quantification.
- Returned NTDDs are not stored properly due to inadequacy of storage facilities at districts
- Disposal of pharmaceutical waste, such as expired and unwanted medicines, is a challenge at all levels of the supply chain—no clear guidelines on procedures for disposal and also lack the incineration facilities.

### Best Practices Common to All Four Countries

NTD program officers in the assessed districts and health centers maintain a specific folder for NTDs which gives the list of the sub-districts and communities, number of people treated in each, the quantity of NTDDs received, the quantity administered, the quantity lost/damaged, what is left on hand, and any adverse reactions observed

## Conclusions

The assessment identified both strengths and weaknesses in the different aspects of pharmaceutical sector. Following the assessment, two post-assessment workshops were conducted in Cameroon and Uganda for the purpose of disseminating the assessment report and to reach consensus with key stakeholders and partners on the way forward. The information gathered from these assessments will be used to develop training materials to be used for workshops to improve supply chain management of NTDs at all levels of the supply chain.

Systems for Improved Access to Pharmaceuticals and Services Program  
Management Sciences for Health | 4301 North Fairfax Drive, Suite 400  
Arlington, VA 22203 USA  
Web: <http://siapsprogram.org/>  
Attn: Greg Simon at [gmsimon@msh.org](mailto:gmsimon@msh.org) or  
Gabriel Daniel at [gdaniel@msh.org](mailto:gdaniel@msh.org)