SUCCESS STORY

Strategic Pharmaceutical Management Information System for TB in the Dominican Republic

Introduction

The effect of public health interventions that use medicines and pharmaceutical supplies is lessened by shortages or losses resulting from decisions made either in the absence of information regarding the supply of such goods or on the basis of information that is either incomplete or inaccurate.

In 2007, the Dominican Republic experienced a shortage of antimalarial medicines throughout its entire health services network, which was attributable to the fact that purchase orders were not being placed until after safety stocks had been exhausted. The underlying cause, subsequently identified, was the absence of a supply management information system that would aid in planning pharmaceutical procurement and distribution.

Health program supply managers frequently find themselves seeking the answers to two questions:

- How many months' supply of medicines do I have in my warehouse? and
- Is it time for me to begin my procurement process?

To assist these managers in finding responses to these questions, Management Sciences for Health's Strengthening Pharmaceutical Systems (MSH/SPS) program has, since 2008, been providing technical assistance to the Dominican Republic's National Tuberculosis Program (or PNTB, for its Spanish abbreviation) in monitoring central warehouse supply status by calculating, on a quarterly basis, the results for a single indicator: **availability, expressed in months, as a function of consumption.**

Quarterly analysis of this indicator has made it possible to improve medicine availability in the health service network, thereby preventing shortages.

$$\text{Availability, expressed in months, as a function of consumption} = \frac{\text{Amount on hand}}{\text{Average monthly consumption}}$$

Intervention and Results

In recent years, the Dominican Republic's health system has been undergoing a process of reform that is hoped will spearhead a move away from a system of centralized administration to a system for the management of Regional Health Centers, and from multiple systems for the provision of medicines and pharmaceutical supplies to a single integrated system.

In July 2010, the Ministry of Public Health (MoH) approved the implementation of an Integrated Pharmaceutical Management System known as *Sistema Único de Gestión de Medicamentos e Insumos* (SUGEMI). SUGEMI's work plan calls for the rollout, over the medium term, of an information system for managing pharmaceuticals; however, as an alternative option for addressing immediately the lack of information needed to effectively

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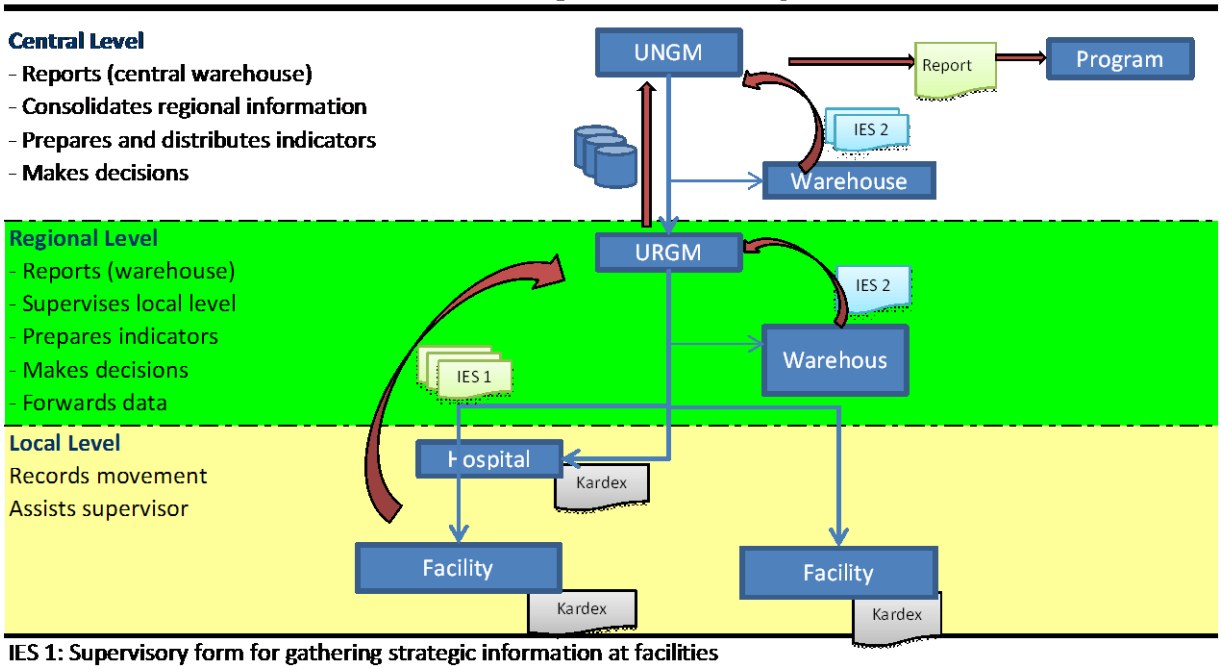
SPS Strengthening Pharmaceutical Systems
The SPS Program is a follow-on to the USAID-funded Rational Pharmaceutical Management Plus Program. The SPS mandate is to build capacity within developing countries to effectively manage pharmaceutical systems and ultimately save lives by improving access to quality-assured medicines.

manage supply, the MoH made the decision to implement a strategic information system (SIS), based on the prior experience of the PNTB. This SIS would make available information for decision-making purposes and in addition encourage a culture of supply information management that would support implementation of the SUGEMI information system.

The SIS calculates an indicator for determining the availability of a group of antituberculosis and antiretroviral medicines, as well as tracer medicines for general use. Every three months, regional warehouses and a sample of supervised care-providing facilities complete a form that enables them to determine the number of months for which they have on hand an adequate supply of medicines and, in this way, take appropriate steps to prevent shortages at the local level. This information is also forwarded to the central level, where it is consolidated with similar information from the central warehouses to obtain an indicator of availability at the national level.

SUGEMI Strategic Information System

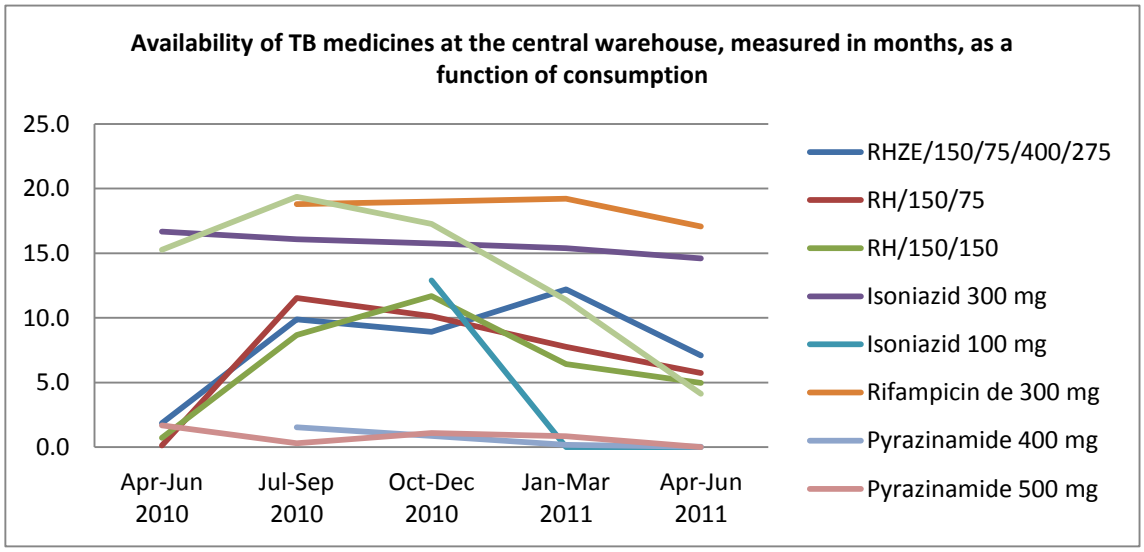


IES 1: Supervisory form for gathering strategic information at facilities
IES 2: Form for gathering strategic information at warehouses
UNGM: National Pharmaceutical Management Unit
UNRM: Regional Pharmaceutical Management Unit

Using this system, a central-level manager could manage a variety of basic scenarios such as the following:

Scenario 1: If my purchase takes 6 months to complete, and I have on hand the equivalent of 1 month's supply in the central warehouse, 2 months' supply in the regional warehouse, and 1 month's supply at the local facility level, what decision should I make?

Scenario 2: The central warehouse has on hand sufficient stock for 12 months, while the regional warehouse has 1 month's supply, and stock on hand in local health facilities is adequate for less than 1 month. What decision should I make?



Team of technicians from the Dominican Republic MoH with MSH/SPS consultants

Conclusion

Determining how many months' supply of pharmaceuticals and related supplies are on hand at each level and in the country as a whole by gathering information for a single basic indicator makes it possible to prevent shortages, either by scheduling purchases on a timely basis or by redistributing stock on hand.

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