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Success Story

Madagascar: Improved Coordination Yields Better Malaria Commodity Management

A girl sits in front of her long-lasting insecticide treated bed net (LLIN) in Madagascar.

Tools developed by the GAS Committee have greatly improved the coordination of supply chain management among partners.

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In the past, malaria partner organizations in Madagascar addressed supply chain issues for malaria commodities independently. The lack of coordination and the absence of data on nationwide stock availability, consumption, orders, and deliveries weakened the country's supply chain system, resulting in both stockouts and a diminished ability to forecast consumption. In response to these inefficiencies, in September 2011 partner organizations formed the Malaria Acquisition, Supply, and Stock Management (GAS) Committee and asked the USAID | DELIVER PROJECT (the project) to serve as the committee's lead facilitator.

Only one month later, in October 2011, the project and malaria partner organizations (the National Malaria Control Program, PSI, SanténNet2, Mahefa, UGP, and Salama) began compiling information on consumption, stock on hand, orders, and deliveries of malaria commodities for quarterly review. Through this collaboration, malaria stock on hand was quantified more accurately. All distribution points were considered, including community health workers, public sector facilities, nongovernmental organizations, other private sector facilities, and social marketing programs. Relying on this data, partner organizations were able to place orders on time and coordinate the delivery of malaria commodities to ensure availability in even the most inaccessible communities.

Since then, information shared regarding malaria commodity consumption has been used to forecast commodity needs, a task impossible before the establishment of the GAS Committee. Consumption needs have also been addressed with greater specificity since forecasted quantities can now take into account both seasonality and geographic location. For example, using

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consumption data compiled by partner organizations, it has been possible to determine the quarterly peaks in rapid diagnostic test (RDT) use throughout the year. Table 1 shows that the number of RDTs needed and the incidence of RDT positivity are highest in the first quarter and lowest in the third quarter.

Table 1. Affected RDT vs. Positive RDT

Year	Quarter	Number of Affected RDT /Quarter	Total of Affected RDT / Year	Number of Affected RDT /Quarter vs. Total per Year (%)	Positive RDT/ Quarter	Total Positive RDT/ Year	Positive RDT per Quarter vs. Total Positive RDT per Year (%)
2011	Q1	217,992	733,010	29.7%	72,388	222,979	32.5%
2011	Q2	197,475	733,010	26.9%	61,362	222,979	27.5%
2011	Q3	135,338	733,010	18.5%	31,569	222,979	14.2%
2011	Q4	182,205	733,010	24.9%	57,660	222,979	25.9%

As a result, the GAS Committee can anticipate an increased need for RDTs and plan procurement and delivery accordingly. The specificity in table 2 demonstrates the level of accuracy with which the GAS Committee can forecast commodity needs. The table identifies the number of test sites per region, the number of RDTs used per region, and the rate of positivity of the RDTs used per region.

Table 2. Positive RDT Rates by Epidemiological Zone

Zones	Number of Sites	RDT Average Monthly Consumption for One Site	RDT Total Monthly Consumption	Rate of Positivity
East zone	4,956	24	118,944	1/3
West zone	4,968	10	49,680	1/4
Sub-desert zone	1,669	10	16,690	1/5
Transition zone	1,956	10	19,560	1/4
Highlands zone	3,553	10	35,530	1/8

With this information, the GAS Committee is able to distribute RDTs as needed to all the regions. Furthermore, using the rate of positivity, the GAS Committee is able to estimate the quantities of ACTs required per region.

The tools developed by the GAS Committee to track stock on hand, consumption, orders, and deliveries monthly have greatly improved the coordination of supply chain management among partner organizations. Careful coordination has, in turn, boosted the goal of strengthening overall malaria commodity management for the country, particularly as it relates to procurement planning. With these new tools, the GAS Committee has successfully forecasted ACT and RDT consumption for the coming year and will continue to do so.

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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