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# MALI: EVALUATION OF THE LOGISTICS MANAGEMENT SYSTEM FOR CONTRACEPTIVES AND DRUGS TO TREAT SEXUALLY TRANSMITTED DISEASES

## EXECUTIVE SUMMARY



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

## **DELIVER**

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Implemented by John Snow, Inc. (JSI), (contract no. HRN-C-00-00-00010-00) and subcontractors (Manoff Group, Program for Appropriate Technology in Health [PATH], and Crown Agents Consultancy, Inc.), DELIVER strengthens the supply chains of health and family planning programs in developing countries to ensure the availability of critical health products for customers. DELIVER also provides technical management of USAID's central contraceptive management information system.

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### **Abstract**

In 2001, the Ministry of Health in Mali, with technical assistance from DELIVER, conducted a performance evaluation of the logistics system for contraceptives and drugs to treat sexually transmitted infections. The follow-on evaluation in 2005 by the Ministry of Health and DELIVER identified changes since the 2001 evaluation; providing information on the logistics system, the availability of products, and the availability and quality of logistics data; and to propose recommendations and activities for further improving the logistics system. This document is the executive summary from the 2005 evaluation report.

## **DELIVER**

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# ACRONYMS

AIDS	acquired immunodeficiency syndrome
CHC	community health center
DDC	district distribution center
DPM	<i>Direction de la Pharmacie et du Médicament</i>
HIV	human immunodeficiency virus
IUD	intrauterine device
JSI	John Snow, Inc.
LMIS	logistics management information system
MOH	Ministry of Health
NGO	nongovernmental organization
SDAME	<i>Schéma Directeur d'Approvisionnement des Médicaments Essentiels</i>
SDP	service delivery point
SPSS	Statistical Package for the Social Sciences
SS	sales storeroom
STD	sexually transmitted disease
USAID	U.S. Agency for International Development



# CONTEXT

In 2005, the Ministry of Health and DELIVER conducted a follow-on evaluation of their 2001 logistics system for contraceptives and drugs to treat sexually transmitted infections to identify any changes made since that time. The evaluation provided information about the logistics system, the availability of products, and the availability and quality of logistics data; and the proposed recommendations and activities for further improving the logistics system.

## SITUATION IN THE COUNTRY

The Ministry of Health (MOH) of the Republic of Mali has emphasized the importance of strengthening the management of contraceptives and condoms for family planning and for protection against sexually transmitted diseases (STDs) and the human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS); and to ensure the availability of these products. The government intends to ensure that the country has a well-functioning distribution network for all drugs in the public and private sectors, by minimizing stockouts and guaranteeing the quality of the products.

The U.S. Agency for International Development (USAID) Mission in Mali, which supplies the majority of contraceptives (including condoms) to the MOH, has requested technical assistance from the DELIVER project to ensure the availability of contraceptives and other essential drugs at service delivery points (SDPs). When the commodities are available, clients will have access to the method of their choice.

## ACTIONS TAKEN SINCE 2001

Since 2001, the MOH has undertaken a series of activities to strengthen its drug management system. With help from its partners, it has developed and validated new forms for logistics management. DELIVER contributed to the production of both a logistics manual and order forms. By supervising and creating a position of director of logistics at the Direction de la Pharmacie et du Médicament (DPM), the project is also strengthening support for the master plan.

At the national level, a national physical inventory of contraceptive products has been institutionalized, and essential logistics data are collected at one time, which can then be used in national forecasting. This approach will help eliminate inadequacies in the logistics system until the logistics system is installed; the new system will allow for the collection of logistics data essential for forecasting. More rational forecasts can be generated if they use the quantities sent from district distribution centers (DDCs) to the community health centers (CHCs), including the data from the national inventory.

Since then, the DPM has standardized the forms for logistics management. It has instituted a Drug Management Report that combines reporting and ordering on the basis of logistics data. This activity has contributed to the strengthening of the logistics management information system (LMIS).

A strategy has been developed to secure contraceptive products. This program, financed by USAID and supported by other partners, benefits from the technical support provided by DELIVER to the DPM, which oversees the coordination. A national effort advocating for inserting a budget line item for the procurement of contraceptive products is under way, as well as a strong media component aimed at raising the awareness of the appropriate authorities.

After an assessment of training needs was completed, a training plan was developed and implemented for warehouse managers. As of now, both the regional and district levels (USAID zone of intervention) have

benefited from this training. The observable outcome of these training programs is the installation of a logistics system and the reduction of stockouts. Since 2001, the MOH has improved the supervision of health centers; contraceptive logistics, which previously had played no role, are now being considered. The involvement of regional pharmacists and the practice of conducting supervisory visits by Schéma Directeur d'Approvisionnement des Médicaments Essentiels (SDAME), with the dynamic support of DELIVER, contributed to strengthening procedures. The MOH introduced a new prescription form that permits better follow-up of pharmaco-oversight.

Additionally, the MOH is strengthening respect for protocols through periodic meetings and SDAME supervision. A limited committee created to follow-up on the Contraceptive Security Plan, piloted by the DPM, is responsible for coordinating donors.

## **CONTRACEPTIVE SECURITY IN MALI**

Mali, with help from USAID through DELIVER, has pledged to guarantee continuous availability of contraceptive products and to offer quality services for contraception. Accordingly, it has established the following specific objectives for the next 10 years:

- Ensure a transition between the supplying of contraceptive products by donors and the acquisition of these products by the government.
- Improve the management of contraceptive logistics.
- Improve the quality of services provided to clients for family planning.
- Reactivate the community-based distribution of contraceptives.

To achieve these goals, the adopted strategies include improvement of the political and regulatory environment related to ongoing financing, progressive augmentation of the role of the government in the acquisition of contraceptives, and involvement of the private sector in the acquisition and distribution of contraceptive products.

The Ministry hopes to improve contraceptive prevalence by 2015. Such a course of action requires the establishment of a robust and dynamic logistics system.

# METHODOLOGY

In 2001, with technical assistance from DELIVER, the Mali MOH conducted an evaluation of the performance of the logistics system for contraceptive products and drugs used to fight STDs. The MOH decided to do a follow-up evaluation in 2005 to identify areas of change and to develop activities for improving the logistics system based on an evaluation of the findings. The evaluation results are also intended to supply information for future decisions about ensuring the supply of these products to Mali.

The objectives of the 2005 study were to—

- Analyze the performance of the logistics system relative to the forecast and procurement of products, the management and distribution of products, the LMIS, supervision, and warehousing.
- Study the availability of contraceptives and drugs for the treatment of STDs at regional stores, DDCs, and sales storerooms (SSs).
- Measure the availability and quality of data used at the DDCs and SSs for ordering products and, at the central level, for the forecasting and procurement of needed contraceptives and drugs to treat STDs.
- Identify the strengths and weaknesses of the logistics system based on an analysis of quantitative and qualitative data, and suggest strategies for improvement.

A research team of 15 investigators, including five regional pharmacists, representatives from the central level, and a health-related nongovernmental organization (NGO), received one week of training in using the Logistics Indicators Assessment Tool (LIAT) for contraceptive products and drugs used to combat STDs. Five teams of three or four people, with a team leader in charge, visited 108 facilities in two weeks (central supply houses, regional warehouses, sales warehouses, and SDPs) in the regions of Bamako, Koulikoro, Ségou, Mopti, and Sikasso. The data collected were entered into Epi Info and analyzed with the Statistical Package for the Social Sciences (SPSS).

The Logistics Systems Assessment Tool (LSAT) was used during a one-day workshop to collect qualitative data on all components of the logistics system. The results from the LSAT and LIAT were then presented during a workshop on strengthening the logistics system in Mali, and were instrumental in the formulating a national action plan. The plan, developed with the participants, identified activities for the central, regional, and district levels. Elements of this plan should be included in the regional annual planning presently being developed.



# RESULTS

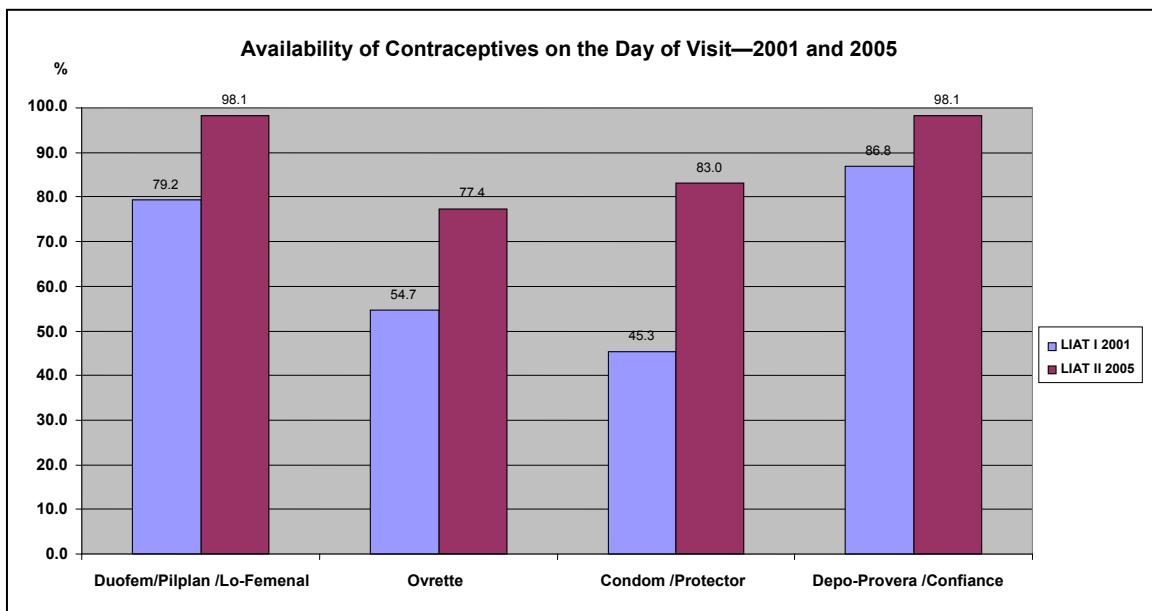
## AVAILABILITY OF PRODUCTS

### CONDITION OF STOCK

Contraceptive products, with the exception of Ovrette, were available in more than 80 percent of facilities.<sup>1</sup> Lo-Feminal and Depo-Provera, the methods in greatest demand, showed an increase in availability between 2001 and 2005 (see figure 1).

However, during the 2005 evaluation, not all methods of family planning (condom, intrauterine device [IUD], Norplant, Ovrette) were available at some of the facilities visited that should be offering them. Methods, the IUD and Norplant, for example, were not offered, either because the staff is not trained in how to use them or, if trained, do not have the necessary materials.

**Figure 1. Availability of Family Planning Products**

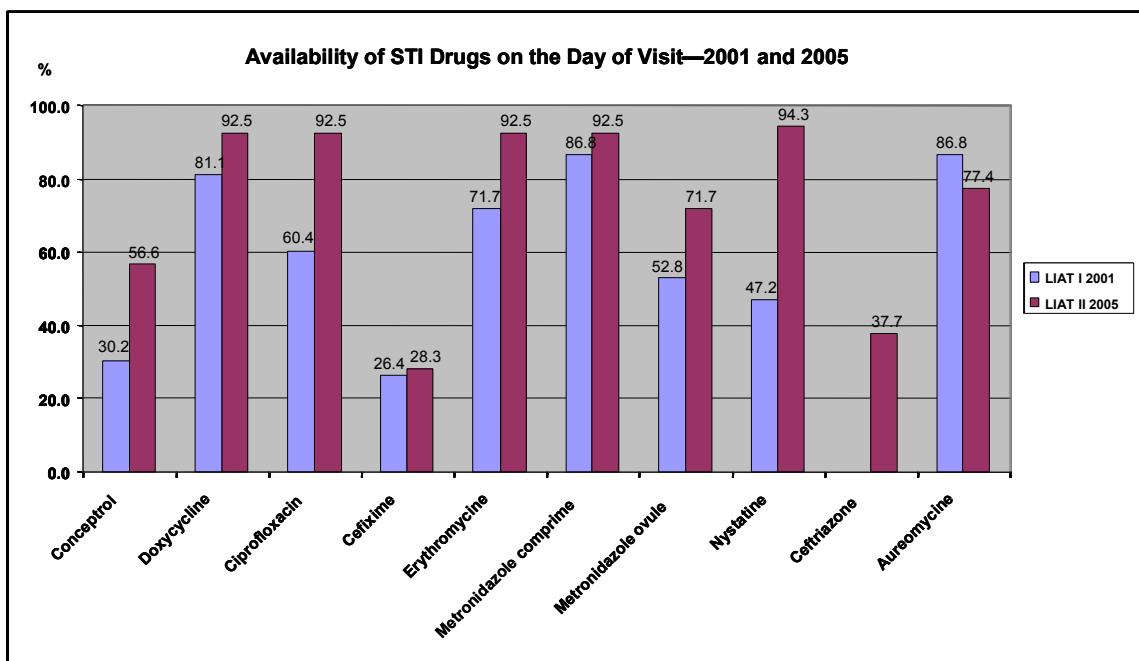


1 Norplant and the IUD were evaluated at the facilities that offer these methods. The other products were evaluated for all the facilities visited.

A relatively low percentage of SDPs had condoms in stock; this can be explained by the fact that condoms are not in demand at the government health facilities. In fact, clients can purchase condoms more easily and quickly in shops where they do not have to identify themselves. Because demand is reduced and sometimes nonexistent, health facilities do not want to use their money to stock condoms and risk having the stock expire. However, all the facilities try to have small quantities on hand, as the Ministry recommends.

Between 2001 and 2005, the availability of products for treating STDs increased (see figure 2). However, many drugs, such as ceftriazone, cefixime, and metronidazole ovule, are still not available at the majority of facilities visited.

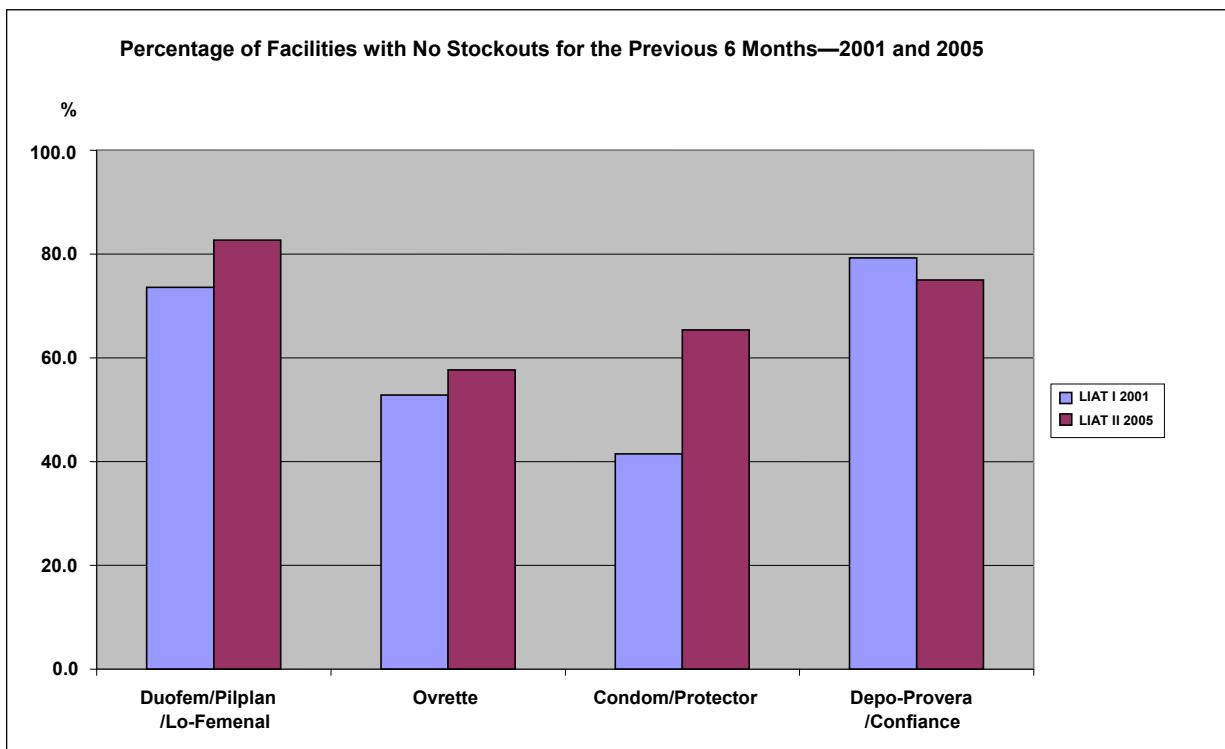
**Figure 2. Availability of Commodities Effective Against STDs**



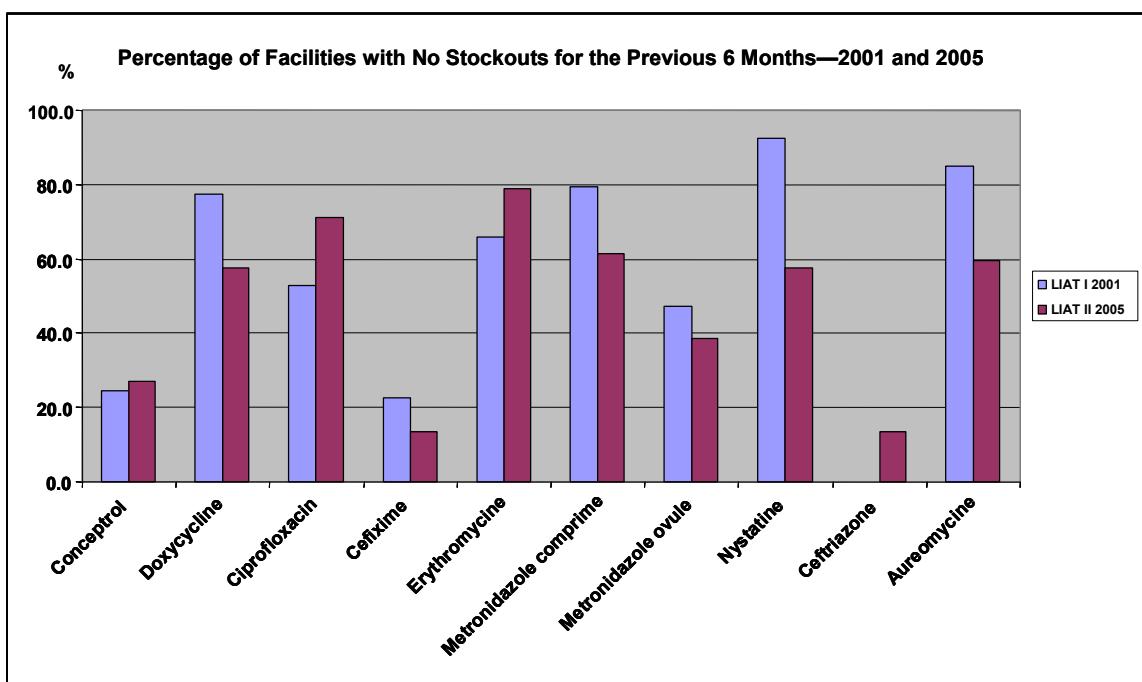
## STOCKOUTS

Between 2001 and 2005, stockouts of contraceptive products and drugs to treat STDs declined during the six months preceding the survey. Additionally, stockouts in 2005 were less frequent than in 2001 for contraceptive products but were more frequent for more than half the medicines used to treat STDs (see figures 3 and 4).

**Figure 3. Percentage of Facilities Without Stockouts of Family Planning Commodities**



**Figure 4. Percentage of Facilities Without Stockouts of Commodities to Treat STDs**



## **EXPIRED COMMODITIES**

No expired commodities were found at most of the centers visited on the day of the visit. This absence of expired products demonstrates the effort the centers made to manage the commodities. The logistics system, although in the process of being established, already fulfills its objective of managing the waste (expiration of commodities) that may occur from overstocking.

## **ORGANIZATIONAL CONTEXT**

In Mali, the environment is favorable to supporting a functioning logistics system. A Master Plan for Procurement of Essential Medicines exists, and adequate personnel are in place. The guides and documents for the appropriate functioning of the logistics system for managing the medications also exist; however, the medications need to be more available to the procurement chain users.

## **LOGISTICS MANAGEMENT INFORMATION SYSTEM**

The Master Plan and the LMIS are in place. However, there is a need to operationalize and establish norms and standard practices for the LMIS.

One-half of the CHC pharmacy outlets (*dépôt de vente*) do not know the formula used to determine the quantity to order when procuring commodities, and their procedures differ. In some cases, commodity orders are placed without reference to a formula that calculates logistics data (informal orders, as needed), either because staff members do not know the appropriate formula or because they are constrained by the financial limitations of cost recovery. However, most of the SDPs consider data—quantity received, quantity consumed, losses, and adjustments—when they make their calculations.

Generally, there is an insufficiency in completing and sending logistics management reports. Logistics management forms are available in sales warehouses but they are not well utilized. More than 70 percent of facilities sent their logistics management reports in the two months preceding the period of evaluation; however, these facilities are not keeping copies of the reports. Most SDPs indicated that they use the logistics management reports in their operations. We noted that approximately 66 percent of facilities use their reports to manage stocks of contraceptives and products for treating STDs.

## **SELECTION OF PRODUCTS**

Mali has a national list of essential and generic drugs that includes contraceptives. The products donated by some NGOs do not always conform to the list of essential drugs.

## **FORECASTING**

At the national level, a committee has all the necessary powers to estimate the country's needs for both contraceptives and medications used to treat STDs. At the time of the survey, issues data and consumption data were not considered when the forecasts were made.

## **PROCUREMENT AND PURCHASE OF PRODUCTS**

The cost recovery system now in place makes reporting to higher levels on essential logistics data for products used to treat STDs almost obsolete. The commercial institutions with which orders are placed base their forecast calculations on the quantities ordered from them. It was determined that orders are placed mainly in relation to funds available rather than to needs dictated by logistics rationale.

## **PROCEDURES FOR STOCK CONTROL**

The majority (between 70 percent and 90 percent) of the facilities visited do not use the maximum-minimum (max-min) inventory control system to manage and estimate stock needs. The facilities are more likely to overstock than to understock. It was observed in most of the facilities visited that the stockcards were not up-to-date; there was a discrepancy between theoretical stocks shown on the stockcards and the actual stocks counted during the physical inventory.

## **WAREHOUSING AND STORAGE**

The system of warehousing and storage often follows good storage guidelines. We noted that 80 percent of the facilities fulfilled at least 75 percent of conditions for appropriate storage. However, fire prevention equipment was absent in most of the warehouses due to a lack of funds.

## **TRANSPORT AND DISTRIBUTION**

Delivery times are very short (fewer than two weeks in the majority of cases). The facilities are responsible for the transport of their products and they find various ways to make sure the products arrive on time.

## **UTILIZATION OF PRODUCTS**

Condoms are almost never dispensed at the CHCs, and other contraceptives are in very low demand or rarely available. The managers apply rules to clients of family planning and require prescriptions before serving them.

## **INSTITUTIONAL SUPPORT**

All managers at regional and district offices are trained in logistics and apply the expertise they have acquired. However, many of the SS managers have low levels of education, which means that the continuous training they have received has not influenced their daily practice in logistics management. To establish an effective logistics system, the favorable organizational context should be followed by training for CHC managers. The approach to supervision of health care is integrated and carried out on a regular basis; however, logistics management is often not included in supervision activities.

## **FINANCING AND COORDINATION OF FINANCIAL PARTNERS**

Contraceptives are supplied by USAID and the United Nations Population Fund. At the national budgetary level, Mali has not had a specific budget line item to purchase contraceptives; nevertheless, their willingness to do so is shown by the existence of a committee for contraceptive security, a strategic plan, and personnel resources devoted to putting the strategic plan into action.



# CONCLUSION AND RECOMMENDATIONS

## CONCLUSION

The systems of logistics management for both contraceptives and medications effective against STDs are integrated. The program has enjoyed continued support from various partners since 2001, and now has all the necessary resources for excellent management. Findings from the evaluation include a reliable availability of contraceptives and a notable reduction in stockouts for both contraceptives and STDs. The program now seeks to ensure the effective application of existing procedures, norms, and standards at all levels through the coordinated reinforcement of each of the elements in the logistics system.

## RECOMMENDATIONS

Below, for quick reference, is a selective synthesis of the recommendations. It was formulated from the findings of the quantitative and qualitative assessments.

- Coordinate and institutionalize support for logistics management that are approved by the DPM, and ensure the reporting and transmission of reports containing data essential for logistics management (stock availability, quantities distributed, losses, and adjustments).
- Make contraceptives and medications used to combat STDs continuously available at all facilities by expanding the range of contraceptives and drugs used to treat STDs at all health centers.
- Make the reporting and order forms for medications available to the CHCs, train personnel in how to use them, and supervise the use of reporting and ordering forms at facilities where they have already been received.
- Supervise the use of inventory control guidelines in effect for the pipeline (application of the max-min system and the master plan) at all levels; reinforce the principle of correct completion and timely submission of logistics forms at all levels.
- Ensure training in logistics management and contraceptive technology for personnel directly involved in the management of reproductive health products.
- Strengthen supervision visits at the CHC level by integrating logistics management into the standard supervision guide.
- Conduct necessary advocacy and reactivate the donors' coordinating committee to ensure insertion of a budget line item into the national budget for the purchase of contraceptives.



For more information, please visit [www.deliver.jsi.com](http://www.deliver.jsi.com).

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