



Logistics Brief

Dominican Republic: Family Planning Program at MOH Is a Logistics Model



Elías Piña Province. Contraceptive logistics and technology workshop for family planning program providers.

Of three LIATs for contraceptives, this is the first that includes basic logistics indicators for other MOH national programs: tuberculosis control, HIV and AIDS holistic care, and the national maternal and child health program.

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Background

In March 2005, the USAID | DELIVER PROJECT completed the first quantitative assessment of logistics indicators for the family planning program in the Dominican Republic. The project determined that the information system, storage, distribution, procurement, and forecasting needed to be strengthened. From this study, the project created a baseline for the workplan that their local office was using to provide technical assistance to the public sector.

In May 2008, five months after the project office opened in Santo Domingo, the USAID | DELIVER PROJECT conducted a second quantitative assessment to measure the outcome of the interventions they were using to strengthen the provincial and local levels. The findings were encouraging; they showed improved availability of contraceptive methods and improvements within the logistics system. The assessment identified two challenges: (1) standardizing logistics management information system (LMIS) forms and (2) ensuring that the LMIS forms reach the upper levels of the supply chain, in a reasonable time. As a result, project staff worked with the Ministry of Health (MOH) officials to develop and implement two forms for the provincial directorates of the health/health area directorates; they also developed consolidation forms. By strengthening the LMIS, the MOH can now use monthly reports to monitor its supply of contraceptive indicators.

The 2010 assessment focused on logistics system components:

- supply and demand
- distribution and transportation
- logistics training
- logistics monitoring and supervision
- inventory control system and use of inventory control cards
- supply
- information system: use of forms and logistics data collection and

Project Accomplishments

From January 2008 until November 2010, the USAID | DELIVER PROJECT worked with local and international institutions in the Dominican Republic to increase the availability of essential health commodities.

They—

1. conducted advocacy efforts
2. fostered strategic partnerships
3. strengthened systems, institutions, and local capacity
4. ensured sustainability.

In July 2010, a few months before the end of the project, the USAID | DELIVER PROJECT staff conducted a third logistics indicators assessment (LIAT). As part of the plan to integrate the MOH's essential drugs and contraceptive logistics systems, this assessment included the family planning program and a selection of tracer medications from the tuberculosis, HIV and AIDS, and maternal and child health (MCH) programs.

In the evaluation, the project and the MOH staff included all the contraceptive methods offered by the MOH. They also included a sample of tracer drugs that could be used to identify the strengths and weaknesses of each program and to establish a baseline for developing activities and strategies to improve their logistics systems. The main findings within each program are summarized in the following sections.

Family Planning Program

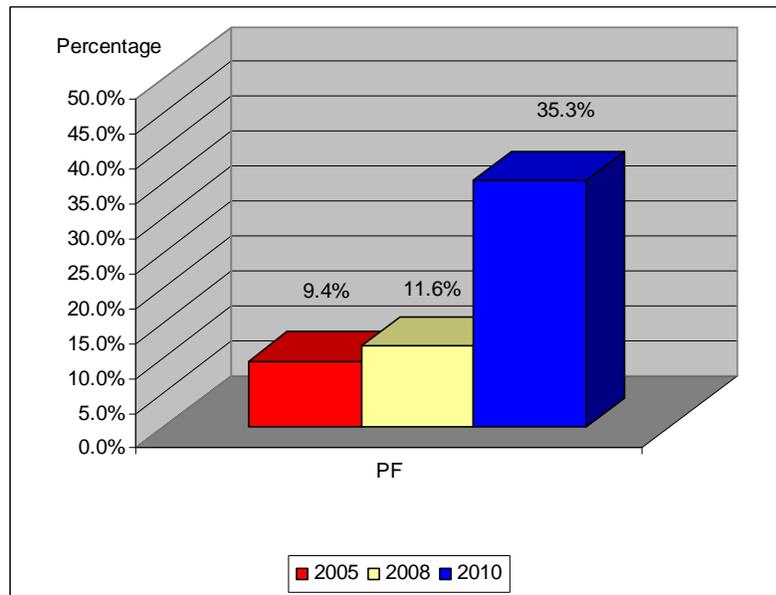
Of the four programs, the family planning program is the only one that consistently and regularly collects essential logistics data on consumption, stock levels, and adjustments for contraceptive logistics management.

Since 2008, the USAID | DELIVER PROJECT has helped make substantial improvements in the LMIS. By increasing the amount of logistics training and by implementing new LMIS forms, the consumption data in the Dominican Republic is more reliable. The project worked with the MOH to address timely report submission; they helped establish a report submission schedule to send reports from the health centers and hospitals to the provincial health directorates/health area directorates and, from these, to the central level. By the end of the project, reporting from the provincial health directorates to the central level was 84 percent.

Health centers (including rural and urban clinics, and provincial and regional hospitals) use the daily activity registry (*Sistema de Información Logística*: SIL 4 [its acronym in Spanish]) to record daily contraceptive consumption data. The same sites use the monthly report and request form (SIL 5), including stock levels at the beginning of the month, quantities received, consumption (which is consolidated at the end of the month, based on SIL 4 data), adjustments, and stock levels at the end of the month; later, staff can compare the report to the physical inventory data.

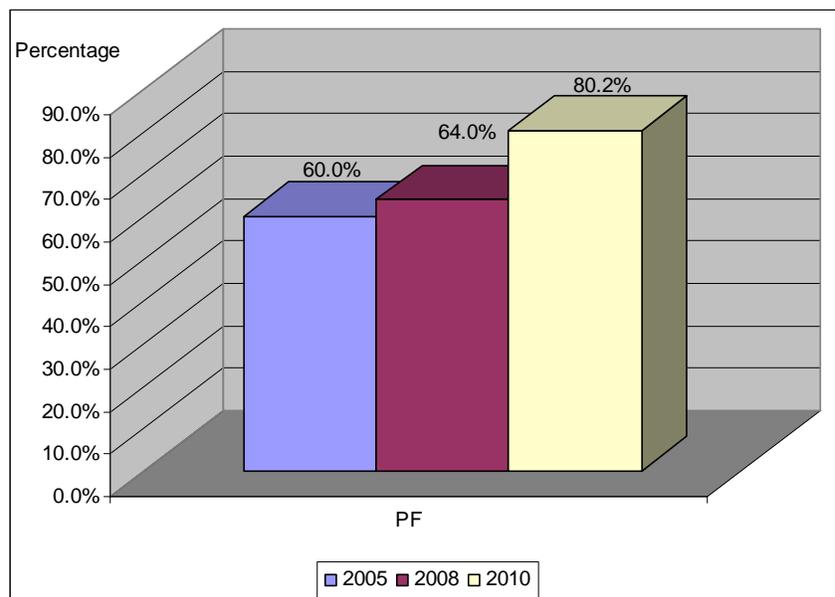
At the same time, inventory control card use has measurably increased—for family planning program sites, from 9.4 percent in 2005 to 35.3 percent in 2010 (see figure 1).

Figure 1. Distribution of Family Planning Sites According to Use of Inventory Control Card



As figure 2 shows, the percentage of MOH family planning program staff trained in logistics increased from 60 percent in 2005 to 64 percent in 2008. From 2008 to 2010, the percentage of trained staff increased to 80.2.

Figure 2: Staff Trained in Logistics



In addition, by including the Reproductive Health Commodity Logistics Module in the curriculum of the *University Eugenio Maria de Hostos* School of Nursing, additional staff will be trained in the coming years.

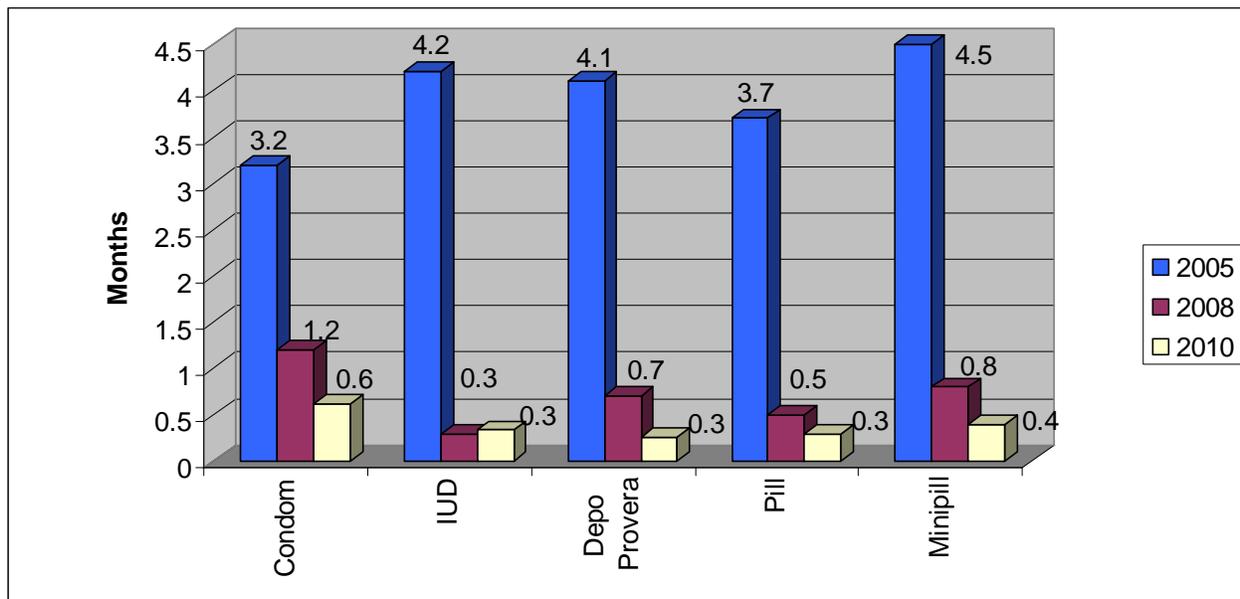
Overall, the number of sites offering contraceptives increased, except for intrauterine devices (IUDs). All sites now offer condoms, Depo-Provera, combined oral contraceptive pills, and progesterone-only pills. The supply of IUDs decreased from 60 percent in 2005 to 51.7 percent in 2010, primarily because the lack of

trained staff at the health-center level to insert IUDs, and the sites had a shortage of insertion kits. Today, only 3.5 percent of the sites currently offer implants, compared to 30 percent in 2005.

The MOH uses a pull system to distribute supplies; the lower level calculates and requests contraceptives from the higher level, based on their consumption and stock data. Of all the sites, 74 percent use a standardized formula to request contraceptive commodities, a significant increase from 2005, when only 14 percent of sites used the formula. As a result, the majority (81.8 percent) of sites receive commodities the same day they submit the request to the higher level. An additional 12.4 percent receive them in no more than one week, and 5.8 percent wait more than one week.

Since 2005, stockouts have decreased for all commodities, from more than three months to less than one month in 2010 (see figure 3). During the third quarter of 2009, a shortage at the central level caused some indicators—for example, the percentage of shortages for the last six months—to be higher for some commodities than the percentages in 2008. However, this indicator was lower this year than for 2005–2008, indicating more shortages, but shorter shortages that were resolved faster. For example, while the shortage of IUDs and Depo-Provera lasted more than four months in 2005, the shortage decreased to 0.3 months for both products in 2010. The shortages were caused by the 2009 transfer of the family planning program from the National Family and Population Council (CONAPOFA in Spanish) to the National Maternal Child Health Directorate (DIGEMIA); the transfer caused delays in the budget allocation process for contraceptive procurement, as well as the data collection process to estimate contraceptive needs for 2010. Fortunately, DIGEMIA now has all the resources and tools to manage the family planning program and its logistics system effectively and in a reasonable time.

Figure 3: Family Planning: Total Stock Duration, by Product Type



Most of the provincial directorates of health/health area directorates use their transportation to pick up commodities from the central warehouse. Health centers, in turn, pick up commodities from the provincial directorates of health/health area directorates, usually within the first four or five days of the month; this coincides with the time they need to submit the SIL 5 monthly report and request report.

Since 2008, maximum (max) and minimum (min) levels have been adjusted for three reasons: (1) the logistics system is functioning better and stockouts are less likely; (2) stock levels need to decrease, particularly at the provincial directorate of health/health area directorate level, because many of them have

limited storage capabilities; and (3) the flow of information from the lower to the central level needs to improve.

For example, in 2008, levels were six months for the max and three months for the min for the provincial directorates of health/health area directorates, and three months and one month for clinics and hospitals. As shown on table 1, since 2008, max-min for both levels in the Dominican Republic health system have been and are now two months and one month.

Table 1. Established Maximum and Minimum Levels for the Family Planning Program, by MOH Level

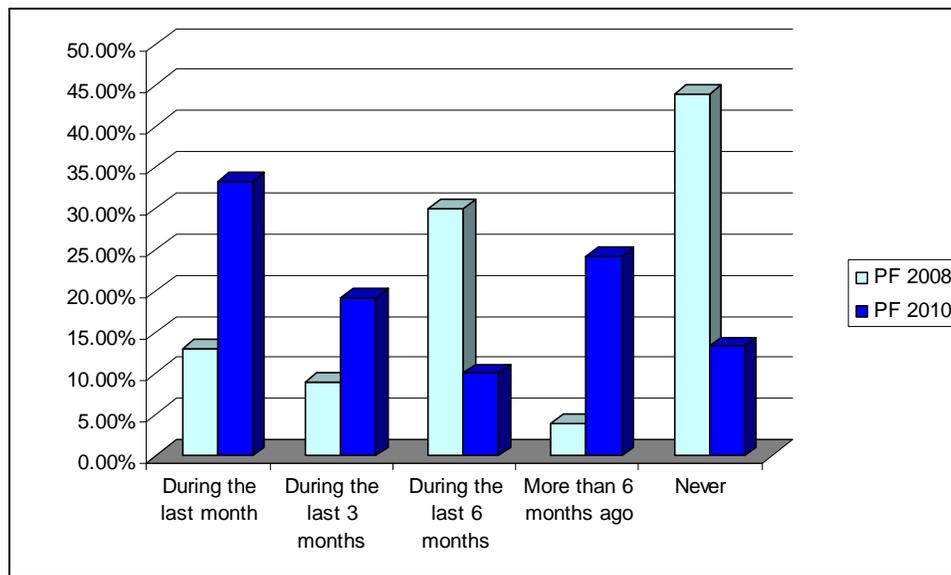
Level	Maximum*	Minimum*
MOH central warehouse	12	6
Área health directorates, provincial health directorates	2	1
Rural clinics, urban clinics, and hospitals	2	1

* For the central warehouse, maximum and minimum mean that the site stores enough commodities to last a maximum of 12 months and has no less than six months of consumption. This applies for area health directorates and provincial health directorates and health centers, considering their levels (in months).

Beginning in February 2009, DIGEMIA receives timely and complete logistics information from the provincial directorates of health/health area directorates on the standardized tools. DIGEMIA consolidates and analyzes the information for decision making. Most data reaches the central level electronically. The project provided computers for the provincial health directorates/health area directorates that needed them.

During supervisory visits, staff working in logistics receive on-the-job training and guidance on how collect and report data. For example, the percentage of health centers that use the SIL 5 report and request report has measurably increased—from 74 percent in 2008 to 89.1 percent in 2010. In addition, data have become significantly more accurate and reliable since 2008. Nevertheless, more effort is needed to ensure that 100 percent of the health centers use this form. See figure 4.

Figure 4. Percentage of Sites That Received Supervisory Visits in Logistics



At the provincial health directorate/health area directorate level, only 50 percent of sites completed the SIL 6 monthly summary report in 2008; by 2010, this increased to 90 percent. While this is a remarkable improvement because these are important links in the supply chain, additional effort is needed to bring SIL 6 use up to 100 percent. Unlike 2008, in 2010, 100 percent of the sites were using the correct form for their level of the supply chain; this was another important achievement.

Storage conditions have greatly improved since 2005; for example, as table 2 shows, the percentage of boxes and containers with a visible expiration date increased from 41.5 percent in 2005 to 73.1 percent in 2010. The percentage of sites that place commodities using first-to-expire, first-out (FEFO) increased from 29.2 percent in 2005 to 73.9 percent in 2010.

Table 2. Family Planning Storage Conditions in Health Centers

Conditions	2005 (%)		2008 (%)		2010 (%)
Cartons and containers identified with visible expiration dates	41.5	▲	53.0	▲	73.1
Products soon to expire are the easiest to reach and are first out	29.2	▲	51.3	▲	73.9
Cartons are protected from direct sun light	71.7	▲	94.0	▲	97.5
Cartons are protected against humidity and leaks	71.7	▲	90.6	▲	96.6
The warehouse is clean	69.8	▲	76.1	▲	89.9

National Tuberculosis Control Program

This program operates somewhat differently from the other three programs. Because of the low incidence of tuberculosis, many facilities do not have a permanent drug stock, and they only request medications from the higher level when they need them.

The national tuberculosis control program has different forms for drugs logistics management, such as the TB-02 daily activity register, the TB-03 quarterly report and request report, and the TB-04 quarterly summary report. However, we must increase our efforts to promote their use, especially at the health-center level.

Of the 56.6 percent of health centers that manage tuberculosis control medications, 83.1 percent submitted reports within a reasonable time. At the same time, 90 percent of provincial health directorates/health area directorates (of the 70 percent that manage these medications) submitted reports within a reasonable time.

Of the 100 percent of health centers that should stock and offer Isoniazid, only 75 percent do. Many sites do not keep this medication in stock; they only request it from their higher level when they have a tuberculosis case.

National HIV and AIDS Integrated Care Program

This program lacks almost all standardized and established forms for the logistics management of drugs. The only form that was analyzed is the *drugs and therapeutic regimens stock report*, which has logistics data in only one category—stock inventory. This form is a record of the number of patients reported, but not the

delivery of drugs by units—which contain data related to the program, but not necessarily logistics-related data.

The use of inventory control card or stock cards for this program was the lowest; therefore, project staff were unable to measure all the indicators.

Only 54 percent of the 100 percent of health centers that should stock and offer Duovir-N and Duovir do so; only 78 percent of health centers stock and offer Nevirapine.

Unlike the Family Planning and the Tuberculosis Control Program, this program is a push system; the higher levels supply the integrated care coordinating units with fixed amounts of medications. Also, 31.5 percent of units must wait one week or more to receive medications. Medications are usually distributed either by transportation arranged for or provided by the higher level.

National Program for Maternal and Child Care

This program functions like the HIV and AIDS program, where the higher levels supply fixed amounts of medications at the beginning of each month and they do not use LMIS forms for medications. Several sites use an inventory control card, but they do not list all the logistics data, such as amounts of adjustments or commodities received and dispensed to date. The drugs in this program are usually handled by the health center pharmacies that manage deliveries.

Conversely, this program had the lowest percentage of drug shortages among the four programs analyzed, which is very positive, especially because it does not manage a specific logistics system.

Challenges

The four programs included in this assessment face challenges moving forward, especially under the health system reform, which considers the change of rules and functions at the regional and provincial health levels, including the integration of the programs. The main challenges are:

Challenges for the MOH's Family Planning Program

- Integrate program into health reform process without reversing the progress thus far.
- Increase the use of the inventory control card, timely report submission, and forms.
- To ensure zero stockouts, improve the allocation of sufficient and timely funds for contraceptive procurement.
- Continue training and providing refresher trainings for staff (also increase pre-service training opportunities).
- To achieve sustainability, continue to lead the contraceptive security committee.
- Ensure that IUDs are supplied to all levels of the program, staff are trained in their insertion and removal, and the product is provided with the insertion kits.

Challenges for the Tuberculosis, HIV/AIDS and Maternal and Child Care Logistics System

- Integrate into the health reform process without reversing the progress thus far.
- Improve the Tuberculosis, HIV/AIDS, and Maternal and Child Care logistics system before integrating.

- Manage any changes that resulted from the national health reform.
- Decide on decentralized procurement using centralized procurement (economies of scale, procurement agents).
- Reverse the high staff turnover to ensure continuity of the logistics processes already in place.
- Achieve *integration without disintegration*: Apply family planning logistics experience for other medications and commodities.

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