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ETHIOPIA: FINAL COUNTRY REPORT



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DELIVER
No Product? No Program. Logistics for Health

ETHIOPIA: FINAL COUNTRY REPORT

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, 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

Since 2003, DELIVER in Ethiopia has worked continuously with two of the Federal Ministry of Health's key departments: the Pharmaceutical Supply and Logistics Department and the Family Health Department. The DELIVER program includes three main elements: design and implementation of the Ethiopian Contraceptive Logistics System, support to contraceptive security, and active involvement in the development of a Health Commodity Supply System Master Plan. With the technical assistance from the United Nations Children's Fund, DELIVER, and other partners, the final Health Commodity Supply System Master Plan was completed and approved by the Ministry of Health in October 2006. Implementation is scheduled to begin in early 2007.

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ACRONYMS

AIDS	acquired immunodeficiency syndrome
ART	antiretroviral therapy
CA	cooperating agency
CPR	contraceptive prevalence rate
CPT	commodity procurement table
CS	contraceptive security
DFID	Department for International Development (UK)
DHS	Demographic and Health Survey
DSW	German Foundation for World Population
ECLS	Ethiopian Contraceptive Logistics System
FDRE	Federal Democratic Republic of Ethiopia
FHD	Family Health Department, Ministry of Health
FMOH	Federal Ministry of Health
FP	family planning
FPTWG	Family Planning Technical Working Group
HCSS	Health Commodity Supply System
HEW	health extension worker
HIV	human immunodeficiency virus
HMIS	health management information system
HPN	Health Population and Nutrition Office (USAID)
HSDP	Health Sector Development Plan
HSEP	Health Services Extension Program
IUD	intrauterine device
JSI	John Snow, Inc.
KfW	German Development Bank
LIAT	Logistics Indicators Assessment Tool
LMIS	logistics management information system
LR	logistics report, ECLS
M&E	monitoring and evaluation
MCH/FP	Maternal and Child Health/Family Planning (FMOH Department)
MOH	Ministry of Health (all levels)

NGO	nongovernmental organization
PASS	Pharmaceutical Administration and Supply Service (renamed PSLD in 2006)
PEPFAR	President's Emergency Plan for AIDS Relief
PRB	Population Reference Bureau
PSLD	Pharmaceutical Supply and Logistics Department (formerly PASS)
RH	reproductive health
RHB	Regional Health Bureau
RHCS	reproductive health commodity security
RLC	regional logistics coordinator
SNNPR	Southern Nations, Nationalities and Peoples Region, FDRE
TB	tuberculosis
TOT	training of trainers
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development

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EXECUTIVE SUMMARY

BACKGROUND

Since beginning its activities in 2003, DELIVER has worked continuously with the leadership of the Federal Ministry of Health (FMOH) and two of its key departments, the Pharmaceutical Supply and Logistics Department (PSLD) and the Family Health Department (FHD). DELIVER has also been active at the regional level, working with Regional Health Bureau leaders, including the Heads, Deputy Heads, and the pharmacy and family planning team leaders, and with zonal health desks and woreda health offices. To support the Ministry's programs in the regions, DELIVER opened five satellite offices, first in Awassa (Southern Nations, Nationalities and Peoples Region [SNNPR]), Bahir Dar (Amhara), and Mekele (Tigray), and later in Dire Dawa (for Dire Dawa, Harari, Afar, and Somali) and Assosa (for Beneshangul Gumuz and Gambella). The Oromia region and the city of Addis Ababa have been supported from the central Addis office.

The DELIVER project in Ethiopia has included three main elements—design and implementation of the Ethiopian Contraceptive Logistics System (ECLS), support to contraceptive security (CS), and active involvement in the development of a Health Commodity Supply System (HCSS) Master Plan. With the technical assistance of the United Nations Children's Fund (UNICEF), DELIVER, and other partners, the final Health Commodity Supply System Master Plan was completed and approved by the Ministry of Health (MOH) in October 2006.

KEY CHALLENGES

With a geographic area roughly twice the size of Texas, an estimated 85 percent of the population living in rural areas, no access to an ocean, and many physical and climatic extremes, Ethiopia's geography provides numerous challenges for the physical movement of drugs and health commodities. Reaching much of the population is a considerable challenge for both the government and other development organizations working within the health sector in Ethiopia. Recent political tensions in Addis Ababa and other cities have also added tension and mistrust to many of the programs and activities of the government, including those of the MOH.

Additional challenges for the MOH include a lack of financial resources; a lack of managerial and technical skills within the various levels of government, especially at the federal level; limited capacity and high turnover of staff in MOH offices at all levels and in health facilities; a lack of clarity regarding roles, responsibilities, and relationships across the levels of government; limited budgets and systems for supervision; independent donor-supported vertical supply systems; and poor, but improving, donor coordination.

Regarding health commodity logistics, the public sector's system suffers from a lack of a formal system design; a haphazard distribution system; limited and often worn-out transport resources; inadequately designed, managed, and maintained warehouses; little useful logistics information, such as consumption data or stock-on-hand data; and poor stock management and inventory control systems and procedures.

SUMMARY OF INTERVENTIONS

ETHIOPIAN CONTRACEPTIVE LOGISTICS SYSTEM

Our primary focus in Ethiopia has been the design and development of the Ethiopian Contraceptive Logistics System. The primary goal of the ECLS is to successfully move contraceptives through the

supply chain to the clients of public-sector health facilities, allowing health facilities to order new quantities based on their usage and remaining stock on hand. The *engine* of this system is the logistics management information system (LMIS), the collection, reporting, aggregation, and use of logistics management information for ordering, resupplying, and forecasting future needs.

At the request of the FMOH, DELIVER initiated the ECLS in the four major regions and in Addis Ababa. With trainer support from the home office, the staff conducted four training of trainers (TOT) programs and oversaw the subsequent roll-out training program in each of these regions/cities. In early 2005, a one-day ECLS supervisor's course was added to the curriculum, and the remaining four regions and two cities of the country were added to the ECLS program. An additional TOT supported the initiation of these new areas. The final implementation phase is to be initiated under the new U.S. Agency for International Development (USAID) DELIVER project.

BUILDING UNDERSTANDING AND SUPPORT FOR CONTRACEPTIVE SECURITY

DELIVER has provided ongoing technical assistance to the Ministry's Family Health Department through annual contraceptive forecasting and resource *gap* analysis. DELIVER also initiated the implementation of a quarterly, contraceptive stock status report for all MOH regions/cities and their family planning partners. This is used by FHD and PSLD to plan quarterly allocations and provide oversight on the contraceptive stock status nationally.

Another aspect of DELIVER's mandate has been to introduce the concept of contraceptive security and build support for better planning and improved forward thinking regarding contraceptive supplies and the environment that supports family planning services. In 2005, the team was successful in reenergizing the Family Planning Technical Committee with a reproductive health commodity security agenda.

STRENGTHENING THE HEALTH COMMODITY SUPPLY SYSTEM

In late 2004, in an effort to address some of the major weaknesses of the commodity distribution system, DELIVER developed and presented a proposal to the FMOH for a major reorganization of the health commodity distribution system. In early 2005, DELIVER and USAID/Ethiopia agreed to expand DELIVER's mandate to include logistics design and implementation activities for other health programs besides family planning. As DELIVER was organizing a plan to discuss with USAID and the FMOH, the newly appointed State Minister for Health, Dr. Tedros Adhanom Gebreyesus (now the Minister of Health), asked UNICEF to lead a design process for a comprehensive Master Plan for the Drug and Health Commodity Supply System. DELIVER was a full partner in this design process that began in July 2005, and the formal MOH launch of the new HCSS Master Plan was held in Awassa on October 3, 2006.

DELIVER has also worked to strengthen warehouse operations and organization. Started at the FMOH's three central warehouses, work has expanded to include the regional warehouses in Tigray and Amhara. Of varying scope, the basic goal has been to improve storage and management (inventory control) of drugs and health commodities within these warehouses. Tasks have included dejunking, reorganization, disposal of unusable products and nonmedical items, introduction of inventory control systems, installation of new shelving, and staff training.

RESULTS

ETHIOPIAN CONTRACEPTIVE LOGISTICS SYSTEM

Through June 2006, a total of 6,209 service delivery and managerial staff had been trained by the DELIVER team and local trainers in either the three-day ECLS course or the one-day supervisor's course. This was equal to about 60 percent of the national target. Trainings were held in every region/city in the country; Addis Ababa, Dire Dawa, Harari, and Tigray completed their planned programs. The final ECLS phase will emphasize the Amhara, Oromia, and SNNPR regions, and will also include the Beneshangul Gumuz, Gambella, and Afar regions. The regional teams have also provided regular supportive

supervision visits to zones, woredas, hospitals, and health centers to assist with skill building, problem solving, and information processing.

BUILDING UNDERSTANDING AND SUPPORT FOR CONTRACEPTIVE SECURITY

With the POLICY Project, DELIVER planned and facilitated a workshop entitled the “National Dialogue on Reproductive Health Commodity Security” in July 2003. A major outcome of this meeting was the reorganization of the Family Planning Technical Committee, formerly the Logistics Technical Committee. In July 2006, with DELIVER’s guidance, this committee organized a second national CS workshop, this time titled the “National Workshop on Contraceptive Security: Ensuring Access to Family Planning.” Key topics included *reconciling targets with gaps* and *developing regional forecasts*. The Family Planning Technical Committee is currently meeting every month.

The supply of contraceptives, while still vulnerable, has improved considerably in 2006/2007. Historically, contraceptives have been donated to Ethiopia, with USAID and the United Nations Population Fund as annual donors and the German Development Bank, the Department for International Development, and others as occasional donors. With the use of modern methods on the rise since 2000, the supply of contraceptives in the public sector was generally unable to keep up with the demand, and shortages and stockouts were significant in 2003 to 2005, particularly for injectables, the preferred method. Recently, however, several of the regions, led by the SNNPR, have begun to allocate funds to procure contraceptives, and the FMOH also allocated a small amount in this year’s budget. With the addition of increased donor contributions, for 2006/2007, if all the promised funds are utilized to procure products, both the funding and product gaps for contraceptives should be quite limited.

STRENGTHENING THE HEALTH COMMODITY SUPPLY SYSTEM

As noted above, a significant milestone was reached when the new HCSS Master Plan was formally launched by the MOH in October 2006. With the strong support of the Minister of Health, the Master Plan is a bold and comprehensive reengineering program for the public sector’s health commodity system that uses the existing strengths of Pharmid, the government-owned pharmaceutical import company, while also aiming to build new information systems and strengthen the supply chain’s design and operation. It is also worth noting that the final distribution system design is fundamentally the same as DELIVER’s original 2005 proposal.

DELIVER will continue to be actively involved as the HCSS Master Plan’s implementation phase begins. By request of the Minister of Health, DELIVER’s former Country Team Leader will become the Lead Technical Advisor for the Project Support Unit. Other staff will certainly be involved at both the federal and regional levels. Only the passage of time will tell whether this new system will be successful.

PROGRAM BACKGROUND

COUNTRY CONTEXT

The Federal Democratic Republic of Ethiopia (FDRE) is a landlocked country with a population estimated at 77.4 million and a yearly estimated growth rate of 2.5 percent (Population Reference Bureau [PRB] 2005). Ethiopia is one of the poorest countries in the world, with an average per capita gross national income of \$110¹ and 80.7 percent of the population living on less than \$2 per day (World Bank 2004). Decades of conflict, drought, and famine have led to massive internal population shifts, and Ethiopia is also home to over 120,000 refugees from neighboring nations.

As shown in figure 1, the Federal Democratic Republic of Ethiopia consists of nine autonomous regions and two cities (Addis Ababa and Dire Dawa), with further division into zones (in some regions) and woredas (districts). These regions/cities have their own presidents and state councils. Ethiopia’s constitution was adopted in 1994 following the overthrow of the military government called the *Dergue* in 1991 and the introduction of a program of decentralization in 1992, wherein many services and policy decisions were shifted to the regional level. As might be imagined, the decentralization process has been neither quick nor simple, as settling the relationships between federal and region, region and zone, zone and woreda has taken years. At present, Ethiopia is relatively stable, though demonstrations followed the most recent national elections in May 2005 and tensions are ongoing.

Figure 1. Ethiopia’s Political/Administrative Regions and Zones



1 All dollar amounts are U.S. dollars unless stated otherwise.

The newly elected government, through its Federal Ministry of Health (FMOH), has made it a priority to design and establish a fully functional, integrated health care supply system that is responsive to individual needs and the varying preferences of the regions, yet addresses all of the needs and policies established by the federal government. Consistent with this priority, the FMOH, with partners that include DELIVER and the United Nations Children’s Fund (UNICEF), has recently undertaken planning for an ambitious restructuring of the entire health care commodity logistics system. Key demographic, reproductive health (RH), and family planning (FP) indicators are outlined in table 1. The final Health Commodity Supply System (HCSS) Master Plan was completed and approved by the Ministry of Health (MOH) in October 2006.

Table 1: Key Demographic, Reproductive Health, and Family Planning Indicators

Indicator	Quantity	Source
Total Fertility Rate	5.40	Population Reference Bureau 2006
Contraceptive Prevalence Rate (married women 15–49, all methods) (%)	14.70	Demographic and Health Survey 2005
Contraceptive Prevalence Rate (married women 15–49, modern methods) (%)	14.00	Demographic and Health Survey 2005
Most Popular Modern Methods (%)		
- Injectables	9.90	Demographic and Health Survey 2005
- Pills	3.10	
Contraceptive Use, by Location (%)		
- Urban	46.70	Demographic and Health Survey 2005
- Rural	10.90	
Infant Mortality Rate (per 1,000 live births)	77.00	Population Reference Bureau 2006
Maternal Mortality Rate (per 100,000 live births)	850.00	Population Reference Bureau 2005
Life Expectancy at Birth (years)		Population Reference Bureau 2006
- Overall	49.00	
- Male	48.00	
- Female	50.00	
Gross National Income Per Capita in \$	110.00	World Bank 2004
Percentage of Population Living in Urban Areas	15.00	Population Reference Bureau 2005
Women Age 15–49 years, in millions (year 2003)	16.53	U.S. Census Bureau-IDB-2006
Estimated Annual Number of Births (thousands)	2,662.00	U.S. Census Bureau-IDB-2006
National Prevalence of HIV/AIDS (%)	4.40	U.S. Census Bureau-IDB-2006

HEALTH CARE SYSTEM

The health care system of the MOH generally follows the political/administrative structures of the FDRE. Regions and cities are responsible for health services and, technically, for the products needed by these services. In turn, the federal ministry’s roles include policy, regulation, standard setting, technical assistance, monitoring, evaluation, and supervision, among others. However, with the youth of the country’s democracy, *level of government* distinctions for these roles and responsibilities are still not well defined or agreed upon; there is still considerable overlap between the levels.

Below the Regional/City Health Bureau (RHB) level, the large regions (Amhara, Oromia, and the Southern Nations, Nationalities and Peoples Region [SNNPR]) include zonal health desks, woreda (district) health offices, and hospitals, health centers, and health posts in their MOH health structure. The emerging regions also have zonal health desks and, technically, woreda health offices, although skills and

budgets are generally insufficient to actually have personnel at the woreda level (Afar, Somali, Beneshangul Gumuz, and Gambella). The remaining regions and cities have their own variations: in Tigray, they have eliminated the zonal health desks and woredas report directly to the RHB; in Addis Ababa, there are 10 subcities with administrative staff; and in Dire Dawa and Harari, the health facilities work directly with the city and Regional Health Bureau, respectively.

The MOH has worked to rapidly expand the health facility network throughout the country during three consecutive Health Sector Development Plans (HSDP). Table 2 highlights the numeric growth of health facilities from 2000 to 2005 (the period of HSDP II). With access to health facilities at a low 50 percent in 2000, the Ministry continues to view an increase in the number of health facilities as a priority objective of HSDP III.

Table 2: Health Facilities Expansion Proposed Under HSDP III

Facility Type	Current Number of Facilities	Target Number of Facilities
Health Centers	300	600
Health Posts	4,211	13,635

Consistent with this physical expansion, another of the Ministry’s priorities is the rapid development of the Health Services Extension Program (HSEP). Initiated in 2004, the HSEP aims to train and install 25,000 health extension workers (HEWs) in communities (kebeles). Trained in more than 17 different knowledge modules ranging from family planning, nutrition, and basic child health to personal hygiene, water sanitation, and vector control, HEWs return to their kebeles in pairs after their one-year training programs to run the health posts and visit households in their communities. The FMOH views the HSEP as the cornerstone for improved access to health care for much of the Ethiopian population.

The Ministry has also prioritized the rapid development of additional Health Officers (B.S. in public health), seeking to expand from 600 (2005) to a target of 3,200. With an historical class size of 200 students each year, this project could have lasted more than 13 years. The Ministry instead began its own training—1,656 were trained so far in 2006/2007, with an additional 510 also upgrading from nursing backgrounds. As a result, it is expected that the target will be met within five years.

Ethiopia is also one of 15 focus countries for the President’s Emergency Plan for AIDS Relief (PEPFAR), with an estimated 1.5 million people currently infected, and a death toll of 900,000—a number predicted to double by 2008. As of October 2006, the MOH was providing antiretroviral therapy (ART) to roughly 49,000 Ethiopians. By the end of 2006, the combined FMOH/PEPFAR/Global Fund ATM program goal is to have 100,000 persons on ART.

THE COMMODITY LOGISTICS SYSTEM

The existing health commodity logistics system, while generally following FMOH administrative lines, is largely the result of donor influences as well as FMOH and Regional/City Health Bureaus’ *best efforts*. Key elements and characteristics include—

- Pharmid, a 100 percent government-owned organization originally developed many years ago to serve the public sector, buys and sells pharmaceuticals for both public sector (mostly hospitals and health centers) and commercial entities. Pharmid has a series of subregional warehouses that it ships to and uses as distribution points.
- A few vertical programs, such as tuberculosis (TB) and, because of DELIVER’s recent efforts, family planning, have a formal system design, forms, and reporting schedules.

- A haphazard distribution system exists, where the central level sometimes delivers products but generally expects regions/cities to collect products when they come to Addis Ababa.
- Commodity transport is provided by a small number of often worn-out trucks and other vehicles, and warehouses are poorly designed, managed, and maintained.
- There is little useful logistics information, such as consumption data or stock-on-hand data.
- Most MOH warehouses have poor stock management and inventory control systems and procedures.

In late 2004, the former State Minister of Health, now the Minister of Health, responded to these logistics challenges and DELIVER's proposals for revisions to the logistics management information system (LMIS) and distribution systems, with a decision to develop a comprehensive plan for the entire health commodity supply system. Following an agreement with UNICEF to serve as the lead technical agency, with DELIVER as a primary technical partner, an oversight committee and a design team were formed; the master plan development process began formally in July 2005. The formal MOH *launch* of the Health Commodity Supply System Master Plan was held on October 3, 2006.

REPRODUCTIVE HEALTH AND FAMILY PLANNING SYSTEM

The United Nations Population Fund (UNFPA) has a long history of assistance to the FMOH, with their fifth country program running from 2001–2005, and a new five-year program in process. The U.S. Agency for International Development (USAID), through contracts with Pathfinder International and DKT, has also actively supported family planning programming at the community level and social marketing. Since late 2003, USAID has supported the development of the Ethiopian Contraceptive Logistics System (ECLS) and contraceptive security (CS) through DELIVER.

Historically, contraceptives have generally been donated to Ethiopia, with USAID and UNFPA as annual donors, and the German Development Bank (KfW), the Department for International Development (DFID), and others as occasional donors. With the use of modern methods on the rise, as noted earlier, the supply of contraceptives in the public sector has been unable to keep up with the demand, and shortages and stock-outs, particularly of injectables, have been significant in the past couple of years. Under the previous administration, the FMOH frequently denied these shortages and stock-outs, thus lending little political support to solutions. The good news has been that several regions have begun to allocate funds to directly procure contraceptives, led by the SNNPR, and the FMOH has also allocated a small amount in this year's budget for contraceptive procurement. For 2006 and 2007, if all the promised funds from Government and partners become available, the funding gap for contraceptives should be small.

KEY PLAYERS AND ROLES

MINISTRY OF HEALTH

Since 2003, DELIVER has worked primarily with the leadership of the FMOH and with two of the major departments/services, the Pharmaceutical Administration and Supply Service (PASS), recently renamed the Pharmaceutical Supply and Logistics Department (PSLD), and the Family Health Department (FHD). DELIVER has also worked continuously with Regional Health Bureau leaders, and with pharmacy and family planning team leaders and specialists from zonal health desks and woreda health offices. To support the ECLS at the regional level, DELIVER opened five satellite offices, first in Awassa (SNNPR), Bahir Dar (Amhara), Mekele (Tigray), and later in Dire Dawa (for Dire Dawa, Harari, Afar, and Somali) and Assosa (for Beneshangul Gumuz and Gambella). Oromia region and Addis Ababa city are supported from the central Addis office.

Several individuals within the FMOH have played pivotal roles in creating and influencing national health policy in Ethiopia, guiding DELIVER's CS and logistics programs, and serving as valuable counterparts. They include—

- The Honorable Dr. Tedros Adhanom Gebreyesus, Minister of Health; formerly RHB Head in Tigray, then State Minister of Health
- Dr. Kebede Worku, State Minister of Health; lead representative of the MOH on the three-country study tour
- Dr. Tesfanesh Belay, Family Health Department Head
- Ato Alemayehu Lemma, Team Leader, HCSS Master Plan; former PSLD Head.

OTHER STAKEHOLDERS

In addition to government, DELIVER has also collaborated closely with the United Nations Population Fund on family planning, reproductive health, and contraceptive security issues; with Pathfinder International, also on family planning/reproductive health issues; and with UNICEF during the HCSS Master Plan development process.

KEY CHALLENGES

With a geographic area roughly twice the size of Texas, an estimated 85 percent of the population living in rural areas, no access to an ocean, and many physical and climatic extremes, Ethiopia's geography provides numerous challenges for the physical movement of health commodities. Reaching the vast majority of the population is a considerable challenge for both government and development organizations working within the health sector in Ethiopia.

Recent political tensions in Addis Ababa and other cities have also added tension and mistrust to many of the programs and activities of government, including those of the MOH.

Other key challenges for the MOH include—

- lack of resources
- lack of managerial and technical skills within the various levels of Government, especially at the Federal level
- limited capacity and high turnover of staff in MOH offices at all levels and in health facilities
- lack of clarity regarding roles, responsibilities, and relationships across the levels of Government
- limited budgets and systems for supervision
- independent donor-supported vertical supply systems
- poor donor coordination, although it is improving.

Key challenges in relation to health commodity logistics include—

- Only a few vertical programs, such as TB and, because of DELIVER's recent efforts, family planning, have a formal system design, forms, and reporting schedules.
- A haphazard distribution system exists, where the central level sometimes delivers but generally expects regions/cities to collect products when they come to Addis Ababa.

- Commodity transport is provided by a small number of often worn-out trucks and other vehicles, and warehouses are poorly designed, managed, and maintained.
- There is little useful logistics information, such as consumption data or stock-on-hand data.
- Most MOH warehouses have poor stock management and inventory control systems and procedures.

In relation to the future of the DELIVER project in Ethiopia, some of the expected challenges include obtaining sufficient resources for implementing the Ministry's new HCSS, both capital and operational; building and maintaining donor coordination of funding and technical assistance; and being successful as a change agent for the Ministry. The latter will be important due to the magnitude and scope of changes required for building the new HCSS.

GOALS AND OBJECTIVES

DELIVER OBJECTIVES

DELIVER’s primary objective has been to improve commodity security by strengthening the MOH logistics information systems and distribution.

Key interventions have included—

- with the POLICY Project, planned and facilitated the “National Dialogue on Reproductive Health Commodity Security” (July 2003)
- designed and developed the Ethiopian Contraceptive Logistics System, including ongoing technical assistance visits by DELIVER regional staff, including supportive supervision
- introduced and built understanding of and support for the concept of contraceptive security
- developed an annual contraceptive forecast and resource *gap* analysis, in coordination with FHD/MOH and UNFPA
- in support of FHD and PSLD, developed and implemented quarterly reporting of contraceptive stock status by all MOH regions/cities and family planning partners
- implemented a warehouse strengthening initiative to improve storage and management of drugs and health commodities, to date in the FMOH warehouses at Amhara, Tigray, and SNNPR
- submitted a detailed proposal to the FMOH on the reorganization of the health commodity distribution system
- participated actively in the design and development of a master plan for a new health commodity logistics system.

RELATIONSHIP TO USAID AND CLIENT OBJECTIVES

The USAID Mission in Ethiopia has recently adapted the new strategic and operational planning approaches of the USAID, including the development of operational plans, a process which was started at the end of DELIVER and is expected to be finalized in January 2007. As a result, at the end of DELIVER, they were not currently working under the previous Strategic Objective/Results framework.

The current structure under which DELIVER is to operate is as follows:

Functional Area:	Investing in People
Program Area:	Health
Program Element:	Family Planning/Reproductive Health
Program Subelement:	Service Delivery

Working as technical advisors on activities of national scope (both the contraceptive and health commodity logistics systems) has at times highlighted differences between DELIVER’s program and the Mission’s focused strategy of sustainable development at the community level. However, the Mission Director and the Health Population and Nutrition Office (HPN) team both provided continuous support to DELIVER and advocated for ongoing financial support for DELIVER’s program. The Mission’s support

for logistics is expected to continue through the ECLS, through contraceptive security, and through the new HCSS Master Plan.

DELIVER'S ROLE IN RELATION TO OTHER ORGANIZATIONS

Beyond its primary relationships with the two key FMOH Departments and with USAID/Ethiopia, DELIVER has also worked with various donors, cooperating agencies (CAs), and local organizations, including—

- the Ministry's Family Health Department, the POLICY Project, UNFPA, the National Office of Population, Engender Health, Pathfinder International, DKT International, and the Ethiopian Obstetrics and Gynecology Association on the "National Dialogue for Reproductive Health Commodity Security" (July 2003)
- Pathfinder International and DKT International on contraceptive forecasting and other supply issues (annually)
- FHD, the RHBs, and zonal, woreda, and health facility staff on the ECLS (from late 2003)
- FHD, UNFPA, the Packard Foundation, and the Family Planning Technical Committee on contraceptive security issues and the recent Contraceptive Security Workshop (July 2006)
- PSLD and UNICEF, on the organization and management of the three FMOH warehouses, including the cold stores (2005)
- the Regional Health Bureaus and Irish AID on warehouse improvements, including the purchase and installation of warehouse shelving (2005–2006)
- UNFPA, Addis Ababa University, and FHD on the Contraceptive Logistics Indicators Assessment (LIAT; 2006)
- PSLD, UNICEF, Pharmid, the Clinton Foundation, Management Sciences for Health/Rational Pharmaceutical Management Plus, the Drug Administration and Control Authority, the RHBs, and others on the development of the HCSS Master Plan (from June 2005).

SUMMARY OF INTERVENTIONS

IMPLEMENTING THE ETHIOPIAN CONTRACEPTIVE LOGISTICS SYSTEM

Beginning in 2003, DELIVER's primary focus in Ethiopia was the design and development of the Ethiopian Contraceptive Logistics System. The primary goal of the ECLS is to successfully move contraceptives through the supply chain to the clients of public-sector health facilities, allowing health facilities to order new quantities based on their usage and remaining stock. The *engine* of this system is the LMIS, the collection, reporting, aggregation, and use of logistics management information for ordering, resupplying, and forecasting future needs.

At the request of the FMOH, DELIVER initiated the ECLS in the four major regions and in Addis Ababa. With trainer support from Arlington, Virginia, the staff conducted four training of trainers (TOT) programs and oversaw the subsequent roll-out training program in each of these regions/cities. A one-day ECLS supervisor's course was also added to the curriculum in late 2004. In early 2005, the remaining four regions and two cities of the country were added to the ECLS program, following an additional training of trainers program.

Through June 2006, a total of 6,209 service delivery and managerial staff had been trained by DELIVER in either the three-day ECLS course or the one-day supervisor's course.

DELIVER has also provided ongoing technical assistance to the Family Health Department of the MOH with annual contraceptive forecasting and resource *gap* analysis, in coordination with UNFPA. The program also initiated the implementation of a structured contraceptive stock status quarterly report for all MOH regions/cities and family planning partners. This is used by both FHD and PSLD to plan quarterly allocations and assess the national contraceptive stock status.

INTRODUCING AND BUILDING SUPPORT FOR CONTRACEPTIVE SECURITY

Another part of DELIVER's mandate has been to introduce the concept of contraceptive security and build support for better planning and improved forward thinking regarding contraceptive supplies and the environment that supports family planning services. In July 2003, together with the POLICY Project, DELIVER planned and facilitated a workshop later called the "National Dialogue on Reproductive Health Commodity Security." One major outcome from this meeting was the reorganization of the Family Planning Technical Committee, formerly the Logistics Technical Committee. In July 2006, with DELIVER's guidance, this Committee organized a second national workshop, this time titled "National Workshop on Contraceptive Security: Ensuring Access to Family Planning." Key topics included *reconciling targets with gaps* and *developing regional forecasts*.

STRENGTHENING THE HEALTH COMMODITY SUPPLY SYSTEM

In late 2004, in an effort to address some of the major weaknesses of the commodity distribution system, DELIVER developed and presented a proposal to the FMOH for a major reorganization of the health commodity distribution system. In March/April 2005, DELIVER and USAID/Ethiopia agreed to expand DELIVER's mandate to include logistics design and implementation activities for other health programs and their products. As DELIVER was organizing a plan to discuss with USAID and the MOH, the newly appointed State Minister for Health, Dr. Tedros Adhanom (now the Minister of Health), asked UNICEF to lead a process to develop a comprehensive Master Plan for the drug and health commodity supply system. DELIVER has been a full partner in the design process since its beginning in May 2005, and the formal MOH launch of the new Health Commodity Logistics System Master Plan was held on October 3, 2006.

Another system development activity that has taken considerable time and effort has been the warehouse strengthening initiative. Started at the FMOH's three central warehouses, it has since expanded to include the regional warehouses in Tigray, Amhara, and SNNPR. Of varying scope, the basic goal has been to improve storage and management (inventory control) of drugs and health commodities within these warehouses. Efforts have included dejunking, reorganization, disposal of unusable products and nonmedical items, introduction of inventory control systems, installation of new shelving, and warehouse staff training. \$40,000 of DELIVER's FY2005 funds were used for the purchase and installation of shelving for the RHB warehouses in Tigray and Amhara.

SUMMARY OF DELIVER FUNDING AND STAFFING

During the term of the DELIVER contract, USAID/Ethiopia committed \$4,720,000 to DELIVER/Ethiopia, comprised of population, malaria, and tuberculosis funds. An additional US\$964,000 was provided from USAID/Washington, for a total of \$5,684,000.

DELIVER first hired three local staff in November 2003 (regional logistics coordinators [RLCs]) for Amhara, Oromia/Addis Ababa and SNNPR. This staff was supported with short-term technical assistance from Arlington and managed *long distance* until September 2004, when DELIVER hired and placed a resident commodity security and logistics advisor, Bernard Fabre. In October 2004, a part-time (50 percent) RLC was hired for the Tigray region, and an accountant/administrative associate was added in the Addis office.

During 2005, there were several additions to the field office team. A warehouse and transport specialist was hired in April to support the Ministry's warehouse improvement activities, and two additional RLCs

for Dire Dawa (Dire Dawa, Harari, Afar, and Somalia) and Assosa (Beneshangul Gumuz and Gambella) were hired in May. A Deputy Commodity Security and Logistics Advisor, Hany Abdallah, joined the in-country staff from the DELIVER headquarters office in September, and four woreda logistics coordinators were hired for Amhara, Oromia, SNNPR, and Tigray late in the year.

The office's contraceptive security work has been supported since October 2005 by Priya Emmart, a Population/Contraceptive Security Fellow through the USAID Population Fellows program, managed by the University of Michigan. The end-of-project staff also included five drivers and a second accountant/administrative associate. In less than two years, the Ethiopia-based staff grew from five to 21 staff, with an end-of-project total of 19.

PROGRAM RESULTS

The results of the DELIVER project in Ethiopia are provided below. They are organized according to the five main elements of the DELIVER contract with USAID. In some cases, as with Element IV, the focus of the element may not be pertinent to the DELIVER/Ethiopia program.

ELEMENT I: IMPROVED LOGISTICS SYSTEMS

MOH DISTRIBUTION (WAREHOUSING AND TRANSPORT)

Historically, within the financially strapped FMOH and RHBs, warehouses, transport resources, and the management of the distribution system have received little attention and even less funding. This lack of attention has been costly to clients of MOH health facilities in terms of commodity losses due to expired and damaged products. While it is difficult to put a price tag on the drugs and other health commodities wasted under these circumstances, it is clear that investing in proper organization, inventory control, and physical facilities and equipment optimizes resources, reduces waste, and allows the regions/cities to better serve their citizens.

Regarding transport, two critical problems facing the distribution system have been the reliance on *collection* and a lack of planning and organization of commodity transport. Most RHBs, zones, and woredas expect the next lower level to collect their supplies, meaning that the lower level must find a vehicle to pick up commodities when they can. While collection is not inherently bad, it is commonly unscheduled, uncoordinated (across programs), late (after stockouts), and insufficient (e.g., items left behind because they are bulky or heavy). While PSLD and some RHBs do provide limited delivery, again, it is unscheduled, often random in terms of location and timing, and based on undefined, case-by-case considerations.

The primary objectives of DELIVER's warehouse interventions were to—

- enable warehouse managers to properly store essential drugs and commodities within the available storage space
- ensure knowledge of warehouse inventory at any given point in time
- avoid stockouts, overstocking, and the expiry of drugs and commodities, particularly at the service delivery points they are designated to serve.

DELIVER's specific interventions, as shown in the final three columns of table 3, included—

- comprehensive cleaning and dejunking, including efforts to get the FMOH and/or region to properly destroy all expired products
- enhancing the physical organization of the inventory by purchasing and installing proper shelving (Tigray and Amhara only)
- instituting a basic inventory management system for monitoring stock (recording of all receipts, issues, and transfers) and improving the storage and safe handling of all commodities
- designing and initiating basic training in warehouse logistics.

Table 3: Warehouse Assessments and Improvements

Level/Region	Warehouse Location	Assessment Type/Date	Warehouse Equipment (quantity/cost)	Staff Capacity Building	Next Steps
Addis Ababa	Addis, FMOH Warehouses	Detailed 5/05 & 8/05, including central EPI cold rooms	Complete cleaning & reorganization; handling equipment \$7,000	Computer training for four store-keepers	
Amhara	Bahir Dar	Detailed 7/05; technical proposal available	120+ shelves \$32,000; completion 8/06	To start after installation of shelves 9/06	Handling equipment, staff training
SNNP	Awassa	Detailed 8/05; technical proposal available	Complete cleaning & reorganization 4/06	Computer training for four store-keepers 8/06	
Tigray	Mekele	Detailed 3/06; technical proposal available	Joint funding Irish AID/DEL for RHB shelves; \$12,000 supported by DEL 5/06	Started 1/06	Supportive supervision

THE HEALTH COMMODITY SUPPLY SYSTEM AND THE MASTER PLAN

DELIVER's Distribution Proposal

In late 2004, DELIVER developed and submitted a proposal to the FMOH for a major reorganization of the health commodity distribution system. The goal of the new system was to have a comprehensive drug and health commodity distribution system delivering products through an expanded set of regional and subregional warehouses. By having health commodities delivered on a regular schedule to warehouses closer to the customers and not bound by administrative boundaries, transport can be more efficient and coordinated; in other words, the transport system would be designed according to the local area being served by each warehouse. In combination with well-managed warehouses with good inventory control procedures, the potential efficiency gains of such a system are considerable. Unfortunately, this proposal was sidelined by the State Minister due to his desire for a comprehensive health commodity supply system strategic plan. DELIVER did continue with more limited warehouse interventions (see above).²

The HCSS Master Plan Process

The Five-Year Master Plan and corresponding Implementation Plan were completed in September 2006 and the Master Plan was officially launched in October. The DELIVER team, including Jeff Sanderson, country team leader; Bernard Fabre, CS and logistics advisor; and Hany Abdallah, deputy CS and logistics advisor, has played a key role throughout the 14-month process. The regional logistics coordinators and other technical staff also participated on assessment teams during the countrywide logistics system assessment in August 2005. USAID/Ethiopia has indicated that they want DELIVER to continue to provide leadership and technical support to the HCSS implementation process and serve as the coordinator for the USAID-sponsored partners.

² It is worth noting that the final distribution system design is fundamentally the same as DELIVER's original proposal.

ELEMENT II: IMPROVED HUMAN CAPACITY IN LOGISTICS

ETHIOPIAN CONTRACEPTIVE LOGISTICS SYSTEM

DELIVER worked steadily with the MOH to help the Ministry improve commodity and contraceptive security for all Ethiopians. The key initiatives included the implementation of a comprehensive contraceptive logistics system with the FHD, the four major regions, and Addis Ababa city, and the redesign and strengthening of the Ministry's commodity distribution (transportation and warehousing capabilities) system for the Pharmaceutical Administration and Supply Service.

ECLS Implementation in the Four Major Regions and Addis Ababa City

Following completion of the pilot phase in the four major regions (May 2004) and completion of the training phase in Addis Ababa city (September 2004), the next steps for the *scale-up* for the four major regions were initiated. Two TOTs programs were planned and held (November/December 2004), and roll-out began in 16 new zones in early 2005. The roll-out phase lasted for eight months. The ECLS for Supervisors course was also introduced in February 2005 through two additional TOTs. This program was designed to be provided alongside the three-day, competency-based ECLS course. In 2006, a second phase of the ECLS scale-up was added for the major regions.

ECLS Expansion to the Remaining Six Regions and Cities

In November 2004, Dr. Tesfanesh Belay, the Head of the Family Health Department of the FMOH, expressed interest in expanding the ECLS to the remaining six regions and cities of the country, as the ECLS was intended to be a national system. The FHD had secured funds from UNFPA to support the roll-out of the ECLS in these regions/cities. The remaining regions/cities began to roll out the training programs in August 2005 and continued through June 2006. A summary of ECLS health provider training is provided in table 4.

Table 4: Summary of Health Providers Trained in ECLS and ECLS for Supervisors*

Region	Trained in ECLS (three days)	Supportive Supervision (one day)
Addis Ababa	265	20
Amhara	1,395	236
Beneshangul Gumuz	120	16
Dire Dawa	60	0
Harari	66	17
Oromia	1,117	165
SNNP	1,340	210
Tigray	1,127	55
Category Totals	5,490	719
Grand Total		6,209

* Information as of June 2006

Notes:

1. Supportive supervision was provided to woreda health office coordinators to assist them in supporting health facilities.
2. Other trainings: Integrated Refresher Training of Trainers for the Woreda Coordinators of Health Extension Workers Program was conducted. To date, coordinators in Oromia (112), Tigray (106), and SNNPR (105) have been trained.
3. Afar, Somali, and Gambella have been delayed due to funding shortages.

Key Milestones in the ECLS Implementation Process

ECLS implementation milestones included—

- ECLS design phase completed—February 2003
- TOT for ECLS pilot phase held—November 2003
- pilot phase completed (one zone in each of the four major regions and Addis Ababa)—May 2004
- ECLS training in Addis Ababa City completed—September 2004
- Phase 2 initiated with two TOT programs—November/December 2004
- roll-out training begun in 16 new zones in the four major regions—January–August 2005
- ECLS for Supervisors course (supportive supervision) introduced during Phase 2 roll-out—February 2005
- MOH expressed interest in expanding ECLS to remaining six regions/cities of the country—November 2004
- new regions/cities initiated with TOT—June 2005
- roll-out training begun in new regions/cities—August 2005–July 2006
- consolidation phase in existing zones in four major regions begun—November 2005–May 2006.

Ethiopian Contraceptive Logistics System Results

In late 2005 and most of 2006, a primary goal of the Ethiopia program was to strengthen the functioning of the ECLS in the zones that had already received ECLS training. The first step was to design monitoring and evaluation (M&E) tools for assessing—

- the level of application of the ECLS in zones where the new system had been introduced for some time, with a particular focus on the flow of reports
- whether or not MOH facilities and health offices had improved contraceptive ordering and issuing decisions by utilizing consumption and stock-on-hand data rather than health service statistics, population, or other estimation approaches.

As much as possible, time series data were used to look at performance over time; where this was not possible, cross-sectional analysis was considered looking at differences at different points in time. A qualitative assessment of ECLS implementation and performance was also used, relying on feedback from observations provided by DELIVER's regional logistics coordinators during supportive supervision visits with health facilities at various levels (see appendix 4).

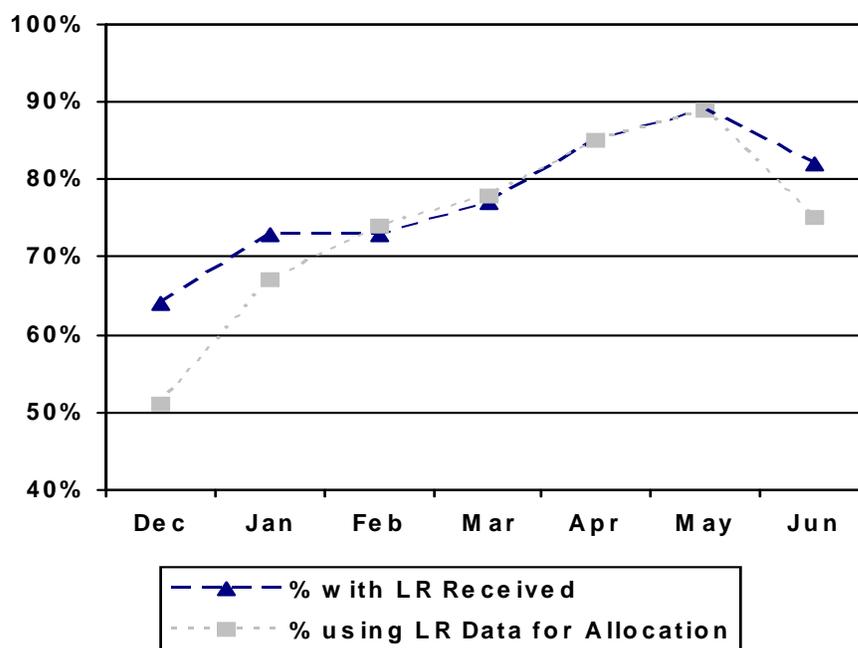
M&E findings are outlined in the following paragraphs.

1. Significant improvements and results have been achieved in implementing the ECLS in Ethiopia; however, these gains are not yet self-sustaining.

Figure 2 shows that the percentage of ECLS-trained *health facilities* using the logistics report (LR) forms to report and order supplies has increased, as has the use of the LR data by the next higher level in issuing decisions (closing the gap between the two lines in the graph). The momentum of improvement has been positive, reaching almost a 90 percent reporting rate in May, though there was a slight decline in June.

Still, levels of reporting achieved in June are close to what is considered a *normal* level for a well-performing LMIS.

Figure 2: ECLS Process-Related Indicators at Health Facility Level*



* "n" in different months varies, from 97-94-95 in Dec.–Jan.–Jun., to 191-174-123-189 in Feb.–Mar.–Apr.–May, respectively. May includes case with no data on whether LRs were used for issuing

Performance was also evaluated at the *woreda level*, which report to and order from zones³. Findings are summarized in table 5. In general, the performance of the woredas in using LMIS data for contraceptive issuing decisions is strong, although the March data raise concerns.⁴

Table 5: ECLS Performance at Woreda Level

	Dec. 05	Jan. 06	Feb. 06	Mar. 06	Apr. 06	May 06	Jun. 06
Number of Woredas in M&E	7	15	46	28	12	14	9
Percentage with LR received	29	80	67	41	75	93	78
Percentage using LR data for issuing decisions	57	100	70	36	100	100	89

3 Or the region in the case of Tigray.

4 It is difficult to draw robust conclusions due to the limited sample size.

2. While the overall national picture is encouraging, there are significant differences in regional performance that are worth noting.

This is made evident when looking at time-series data on health facilities once they have received ECLS training, as shown in figures 3 and 4. In Amhara region, since the addition of a Woreda Logistics Coordinator and the completion of most of the ECLS training by January, the attention and supportive supervision provided to health facilities appear to have paid off in the form of a high, and steadily increasing, reporting rate, as well as Regional Health Bureau use of LR data for the issuing of contraceptives (figure 3).⁵ On the other hand, while Dire Dawa is a smaller region and intuitively should be easier to support, reporting rates have not been as high as expected. Generally, completing and sending LR forms seems to be linked with ordering rather than reporting. As figure 3 shows, there is no difference between the two lines within two months after the introduction of the ECLS in February. In addition, reporting seems to pick up every other month, most likely when safety stocks are low (maximum inventory levels at health facilities are set as two months).

Figure 3: ECLS Performance in Amhara

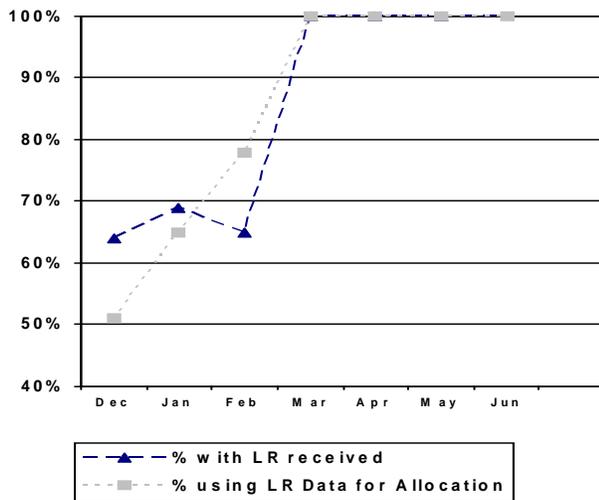
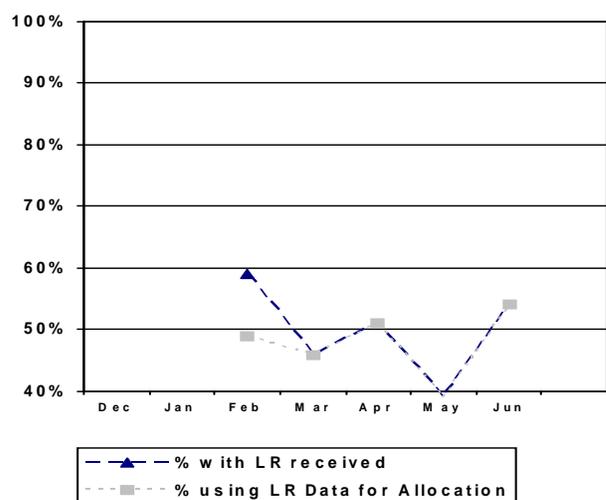


Figure 4: ECLS Performance in Dire Dawa



3. A number of factors affect the success of ECLS, including the availability of recurrent resources and budgets; the commitment of decision makers to the system, especially at higher levels; the availability of products within the pipeline; and the turnover of trained health facility staff and supervisors.

The following are the major findings from qualitative assessments of the ECLS compiled from DELIVER’s regional and woreda logistics coordinators in all 11 regions.

- *Recurrent budgets:* The primary challenge for ECLS is not building the system but strengthening it and making sufficient funds and resources available for its successful operation. These resources include ensuring an adequate supply of LR forms (or basic stationery for use as forms) for facilities, and committing funds for supervision visits (transport and per diem). There are various examples where

⁵ In Amhara, the “n” varies in different months, from 80 in December to as low as 22 in April and 31 in March.

performance increased in a health facility or woreda following one or two supportive supervision visits by DELIVER and/or zonal/woreda officials (Hawthorne effect 6).

- *Commitment to the system:* In early 2005, the ECLS had been introduced in various zones but was not being fully utilized (information was not being reported and orders were not being placed) because woredas and health facilities felt that no value would come from sending reports/orders. This was in part because there was a significant shortage of contraceptives in the country and available stock was below the level required to meet the existing and rapidly growing demand. More recently, while the national contraceptive stock status has improved, a reverse scenario seems to be appearing wherein woredas and health facilities are not reporting because they know they will receive an allocation whether they complete their LR forms or not. Both scenarios underscore the need for commitment to the system, especially at the highest levels, to ensure that LMIS data are collected, reported, aggregated, and used in contraceptive issuing decisions.
- *Turnover of trained personnel:* In various situations, implementation of both the ECLS and the M&E system was delayed due to staff turnover. Staff turnover has a direct effect on the facility's ability to perform ECLS functions, and only rarely were there instances found from the M&E data (three cases in the May data) where ECLS reports were completed even though no trained personnel were still available at a site. Using supervisory visits to train new staff recruited because of attrition is a common practice for DELIVER staff, even though it is quite time-consuming.

LOGISTICS INDICATORS ASSESSMENT RESULTS

The 2006 Logistics Indicators Assessment Tool (LIAT) was used to conduct an assessment in January and February 2006 by the Demographic Training Research Centre of Addis Ababa University, with technical assistance from DELIVER and funding from UNFPA/Ethiopia. The primary beneficiary was the Family Health Department of the FMOH.

The 2006 LIAT was a follow-on to the first survey on contraceptive logistics conducted in 2001 when 77 government health facilities in Ethiopia were sampled. For the 2006 LIAT, the sample size was increased from 77 total facilities to 145, roughly a doubling of the initial number. Of the 145 sites selected, a total of 138 sites were actually visited—95 percent of the planned sample size. Both Maternal and Child Health/Family Planning (MCH/FP) staff and the staff person most involved with contraceptive logistics were interviewed at each visited facility.⁷

For product availability, the LIAT results clearly provided a mixed picture, with variation by method and brand type. Facilities suffered from both over- and under-stocking, reflecting the use of a random system of contraceptive distribution as well as occasional but large increases in stock flows due to federal allocations such as the one in late 2005.

Of the 138 facilities visited, which had managed pills in the previous six months, 30 percent had stocked out of the most popular oral pill, Microgynon, at some point; almost 60 percent had a stockout of Lo-Femenal, an alternative but less available and therefore less well-managed pill; and 78 percent had a stockout of Excluton, a low-dosage progesterone-only pill for nursing mothers. The most popular contraceptive method in Ethiopia, three-month injectables, accounts for more than 60 percent of the total method mix. In the six months prior to the survey, nearly 59 percent of facilities managing Depo-Provera had experienced a stockout of Depo-Provera, compared with 62 percent for those managing Megesteron. For implants, a long-term method of growing importance, 63 percent of all facilities managing Norplant

6 The Hawthorne effect—Behavior change occurs as a result of the attention provided to the subject.

7 The 2006 LIAT was conducted within two months after an FMOH allocation and the corresponding regional pickup of contraceptives from the central MOH warehouse in November–December 2005. As such, any findings related to overstock and appropriate levels of stock must be viewed with caution, because they may represent a skewed picture due to the recent distribution of contraceptives.

reported being stocked out at some point in the six month period, and of the smaller number of facilities managing Jadelle, 50 percent had suffered a stockout within these six months. In comparison, only 27 percent experienced a stockout of intrauterine devices (IUDs), and 20 percent stocked out of male condoms (among the facilities managing these methods).

One positive finding was the percentage of facilities with expired stock. With the exception of lesser used products, such as Excluton (35 percent) and female condoms (30 percent), the range of expired products found on the day of the visit was between 0 and 9 percent, with only Lo-Femenal (20 percent) outside this range. This suggests that most health facilities are using the contraceptives they receive and higher levels are moving them down to the facility level.

In 2001, during the first LIAT, the Ministry did not have a logistics system for managing contraceptives. Based on the 2001 LIAT findings, a national contraceptive logistics system (ECLS) was proposed and implementation began in late 2003. The 2006 LIAT results reveal that the implementation of the ECLS has taken root. Of the 138 facilities sampled, a total of 66 percent identified themselves as ECLS sites, while 56 percent of providers interviewed had received ECLS training.

While the findings generally reflect a concerted effort to systematize collection, reporting, ordering, issuing, and receiving of contraceptives, the impact of the ECLS training has been diluted by several years of inconsistent product availability. Discussions with providers on the poor use of LR forms and data consistently revealed that providers were frustrated in using the new ECLS because issuing decisions at the higher levels were still being made by allocation and not demand (the amount they ordered/requested). Of the facilities using the ECLS for ordering, 75 percent reported a difference between the quantities of Microgynon ordered and received, with a range from 96 cycles less than ordered to 520 cycles more than requested. Nearly 86 percent reported similar gaps for Depo-Provera, with a range from 74 vials less to 316 vials more than requested. In addition, less than 20 percent of all facilities used a maximum level to order contraceptives; less than 25 percent used an emergency order point to trigger an urgent request for contraceptives. The gap between training/knowledge and actual use of ECLS methods was largely attributed to the fact that higher levels continued to experience shortages (non-full supply) and continued using allocation approaches⁸ rather than *filling orders*. Facilities also commonly reported receiving products not ordered and not receiving products that their clients were demanding.

Beyond product availability and training, the ability of the ECLS to respond to changes in contraceptive behavior (demand) and consumption-driven orders will depend, in part, on the supervision provided to service providers by higher levels. The 2006 survey revealed that almost half (45 percent) of all respondents had never received supervision on the management of contraceptives, and an additional 11 percent had not received supervision within the previous six months. For the ECLS to be successful, supportive supervision on LMIS tasks for service providers and woredas is essential.

ELEMENT III: IMPROVED RESOURCE MOBILIZATION FOR CONTRACEPTIVE SECURITY

FY 2005–2006 was a benchmark year for contraceptive security in Ethiopia. The catalyst for Ethiopian interest in CS was the East Africa Reproductive Health Contraceptive Security Workshop, held in November 2005 in Dar Es Salaam, Tanzania, and organized by the German Foundation for World Population (DSW) and DELIVER. The participants included teams from six East African countries, with Ministries of Health, National Offices of Population, donor organizations, social marketing groups, and the private sector represented. The Ethiopia team comprised 12 members headed by the Amhara Regional Health Bureau Head, who was designated as the team leader by the Minister of Health.

⁸ These methods were described at various times by the service delivery points as unfathomable and random.

DELIVER used this event to successfully reenergize the Family Planning Technical Working Group (FPTWG), a technical advisory committee of the FMOH charged with managing issues related to family planning, contraceptive security, and contraceptive logistics. With DELIVER's assistance, the Ethiopia team distinguished itself by being the only country team with a preliminary work plan prior to the Workshop. As a result, the priorities identified in the Ethiopia work plan reflected established concerns and a strong commitment to addressing them. Having a large number of FPTWG members at the workshop also created possibilities for new alliances and enhanced interest in working on CS in Ethiopia.

The three priorities in the Ethiopia CS work plan were to—

1. improve resource commitments from Government and donors for contraceptives and RH commodities
2. develop a policy environment that supports enhanced attention to availability, choice, and use of contraceptives
3. increase the programmatic and structural links between family planning and HIV/AIDS as a way of repositioning family planning in Ethiopia.

Following the Tanzania workshop, DELIVER took responsibility for providing key technical products to the FPTWG, including a national contraceptive forecast, quarterly updates on the national contraceptive pipeline, a deconstruction of the MOH's health management information system (HMIS)-based estimate of family planning coverage (new and continuing users in relation to the contraceptive prevalence rate [CPR]), and a regional-level analysis of demand, method mix, and stock on hand for the next five years. Due to the active coordination between DELIVER and the MOH/FHD, the FPTWG met at least once a month for eight months, a remarkable achievement given that it had met fewer than two times per year during the previous two years.

The role of DELIVER as a reliable information source on matters related to CS is now widely accepted by both the Ministry and its reproductive health partners. Examples include being requested by the Minister to present an analysis of the links between contraceptive security and Millennium Development Goals and poverty reduction, and being invited to present to the HPN donor group in April and the European Union Roundtable on Population in May. DELIVER was subsequently invited to become a member of the HPN donor group because of its roles in both logistics and contraceptive security.

One of the culminating activities for the FPTWG's CS work plan was the organization of a national CS workshop. With the primary goal of bringing together decision makers from maternal and child health, logistics and pharmacy, and finance at the national, regional and woreda levels, the National Workshop on Contraceptive Security, "Ensuring Access to Family Planning," was conducted on July 12, 2006. The meeting had more than 100 participants from 9 of the 11 regions. Of particular interest was the active financial support of the Family Health Department of the MOH, which reflected increased ownership of the CS agenda.

The commitment to CS as an important reproductive health issue has occurred within an improving policy climate. The FDRE has made population growth a focus in its recent document on Economic Growth and Poverty Reduction. The Ministry of Finance and Economic Development has expressed strong concern that current rates of fertility will have considerable negative effect on economic growth and has expressed support for improving access to and use of family planning. In March 2006, the World Bank, at the Ministry's invitation, examined the links between poverty, population growth, and welfare.

One of the most promising trends for CS in Ethiopia is increasing Government and donor commitments to the procurement of contraceptives. For FY 2006–2007, the FGOE has allocated ETB100,000 (\$11,500) for contraceptives in the national budget. Increased commitments have also been made by regional governments and donors, including the World Bank, DFID, the Swedish International Development

Cooperative Agency, and USAID, as well as anticipated commitments from the European Union for the next two years.

ELEMENT IV: IMPROVED ADOPTION OF ADVANCES IN LOGISTICS

The HCSS Master Plan sets out a comprehensive and ambitious program for reorganizing the entire health commodity supply system of the MOH. Innovative approaches within this design include—

- emphasizing the essential drugs and health commodities which are specifically related to the MOH's Essential Health Services Package
- maintaining the procurement of essential drugs and health commodities at the central level, in the face of an otherwise decentralized health system, yet placing procurement responsibilities in a separate Government-owned entity (*New Pharmid*)
- streamlining the health commodity distribution network to a maximum of three levels (supplier to *New Pharmid* hub warehouse to woreda health office to health post), with the majority of the system including only two levels (supplier to *New Pharmid* hub warehouse to hospital or health center)
- placing the majority of the logistics capacity of the MOH in a separate government-owned entity (*New Pharmid*)
- developing and using a national revolving drug fund for essential drugs and health commodities
- emphasizing local-level control through a woreda/hospital/health center health commodity ordering system using local budgets for payment.

ELEMENT V: ESTIMATION OF USAID CONTRACEPTIVE NEEDS

Like most other DELIVER field offices, the Ethiopia office has assisted the MOH with annual contraceptive forecasts for Ethiopia. Since 2003, DELIVER has not provided formal contraceptive procurement tables (CPTs) for the following reasons:

- In Ethiopia, USAID procures contraceptives primarily for nongovernmental organizations (NGOs) that are supplied by Pathfinder Ethiopia and for the DKT social marketing program.
- With DELIVER's assistance, both Pathfinder and DKT have gained CPT competence and now do their own CPTs for USAID/Ethiopia.

Only in the past year has USAID/Ethiopia purchased contraceptives for the MOH. In this case, the USAID/Ethiopia Logistics Officer, using the DELIVER forecast, produced the CPTs for the Ministry. DELIVER's 2006 contraceptive forecast and resource analysis were used by the MOH and the HPN donor group to advocate for new funds for the procurement of contraceptives to address the contraceptive shortage that has existed for several years (see also Element III above).

LESSONS LEARNED AND FUTURE DIRECTIONS

CONTRACEPTIVE LOGISTICS SYSTEM AND CONTRACEPTIVE SECURITY

In the year ahead, implementation of the Master Plan for the new HCSS is expected to dominate public-sector logistics. While it is believed that there is value in completing the implementation of the ECLS, DELIVER will need to discuss this issue with USAID/Ethiopia and negotiate with the leadership of the FMOH. Staff in health facilities and MOH supervisory positions benefit from the basic logistics training they receive in ECLS through both courses, so there is *value added* for ECLS training to continue in the remaining zones in Amhara, Oromia, and SNNPR regions. In addition, RHB leaders in these regions have requested that the ECLS be continued.

For lessons learned, the following key issues emerged:

- Supportive supervision visits are extremely useful for ensuring local facility performance.
- There is need for active commitment to, and support of, the use of the logistics system by higher level officials, particularly in relation to contraceptive issuing decisions.
- Full supply reduces task avoidance by health facility and lower-level personnel. In other words, being stocked out often reduces the desire of health facility staff to complete the reporting and ordering process.
- Improvements in warehouse management and transport must be made to ensure adequate commodity distribution.
- Staff turnover is a constant challenge and needs to be addressed through a variety of alternative training modalities.
- Training is costly given the number of staff to be trained and high turnover.

For CS, next steps include—

- harnessing support at the national and regional levels to improve information sharing and forecasting and logistics capacity in the Regional Health Bureaus
- conducting a market segmentation study to assist the MOH in making decisions regarding willingness and ability to pay
- exploring sustainable solutions to decrease costs, such as building in-country capacity for TOT (trainer teams) or DELIVER sharing training costs with another donor/partner; and coordinating and planning with the RHBs, such as UNFPA paying for participant costs and DELIVER providing the trainers and materials.

HEALTH COMMODITY SUPPLY SYSTEM

The HCSS Master Plan implementation process is scheduled to begin in October 2006. USAID has suggested that they want DELIVER and the follow-on project to be the lead agency for support of the Master Plan. Discussions will be held in September on the work plan and the technical assistance support required for the Master Plan and the continuation of family planning program support activities. While

there are many *setup* steps within the Year 1 HCSS Implementation Plan, many of them relate to DELIVER's areas of expertise, including development of the LMIS, the essential drug and health commodity list, and further refinement of the distribution plan (hub warehouses and transport planning). DELIVER staff look forward to the many challenges ahead as they support the HCSS Master Plan.

WAREHOUSING

A series of negotiations with the Regional Health Bureaus regarding existing warehouses is one of the key steps needed to finalize the locations for the *New Pharmid* hub warehouses. It is anticipated that some regional and zonal warehouses will be transferred to New Pharmid to become part of the new distribution network. After they are identified, DELIVER will work with many of these warehouses to improve their organization and inventory management systems. DELIVER will also continue to work with SNNPR and initiate a warehouse improvement program in the Oromia region.

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APPENDIX 1

CS BRIEF

ETHIOPIA 2006

Contraceptive Security Brief

Population (2005, estimated)	74,777,981 (BUCEN IDB 2006)
Population growth rate	2.312 (BUCEN IDB 2006)
Total fertility rate	5.4 (EDHS 2005)
CPR	
All methods, women in union	14.7% (EDHS 2006)
Modern methods, all women	10.5% (National Forecast Estimate 2006)
Modern methods, married women	13.9% (EDHS 2006)
Unmet need	35.8 (DHS 2000)
Total demand	43.8 (DHS 2000)
Source	
Public sector	77.5% (DHS 2000)
Private medical	15.5% (DHS 2000)
Other private	5.8% (DHS 2000)
HIV/AIDS Prevalence Rate (adults 14–49, 2005)	4.8% (MOFED–2006)
Health regions, districts, and service delivery points providing RH/FP services	Regions: 11 Zones: 62 Health Centers: 520 Health Stations: 2,452 ⁹ Health Posts: 1,899 Hospitals: 123
	<i>(Note: These are total facilities as per HSDP III; no data are available for those providing RH/FP services.)</i>

9 The Health Sector Development Program III (HSDP III 2005–2010) plans to upgrade 2,167 health stations to health centers making the total number of health centers 3,153.

Forecasting	
Current method mix and projected trend (DHS 2000, married women)	<p>Injectables: 67.4% (increasing) Pills: 21.1% (decreasing) Condoms: 1.4% (decreasing) Fem. sterilization: 1.4% (decreasing) IUDs: 1.4% (decreasing) Implants: 1.4%–2% (increasing)</p> <p>Preliminary findings from the EDHS 2005 indicate that CPR has nearly doubled between 2000 and 2005, from 8.1 percent to 14.7 percent among women in union. Urban fertility has declined significantly, whereas no significant change has occurred in rural fertility.</p>
Presentation and use of CPTs in management decision making	<p>MOH: Forecasts have been prepared using demographic data from EDHS 2005 fertility findings and was based on analysis using SPECTRUM for a five-year projection. The Family Planning Technical Working Group, chaired by UNFPA, has mandated assistance from DELIVER; the project will be in charge of monitoring the pipeline and ensuring that orders are made and delivered on schedule.</p> <p>NGOs: In 2002, following CPTs in April, USAID ordered contraceptives for the NGOs it supports using Pathfinder requests rather than on DELIVER's CPTs. In 2003, contraceptive orders were made according to the CPTs prepared by DELIVER in August. USAID has used Pathfinder and DKT forecasts for procurement since 2004.</p>
Assumptions related to data used in the CPTs (approach used)	<p>MOH: Stock status at the regional and national level has been assessed for each quarter since October 2005; there are currently three completed quarters of stock status data. Extrapolated balances were used to assist 2002 CPT calculations. To estimate past consumption during 2003 CPTs, actual inventories and issue data for the central level plus regional inventory estimates provided a limited comparison with demographic projections. For future consumption, increases of at least 10 percent for all products were projected, except for IUDs (Copper Ts).</p> <p>NGOs: Estimates made for the MOH include transfers made to NGOs that the MOH supports. Estimates for NGOs supported by Pathfinder and Packard were made based on reported consumption and projected transfers to MOH facilities at the woreda level.</p> <p>DKT: DKT forecasts were based on projected trends from their historical sales data.</p>
Sources and accuracy of data used in forecasting (data quality)	<p>MOH: Data sources for the projections were the SPECTRUM System; EDHS 2005; The Ethiopian Central Statistical Authority; U.S. Census Bureau; and information provided by major stakeholders, including Pathfinder International, EngenderHealth, DKT International, FGAE, Marie Stopes, and UNFPA. All forecasts must be viewed with caution due to the lack of consumption data in a somewhat fluid environment.</p> <p>NGOs: Final estimates for the MOH include all quantities the MOH anticipated transferring to NGOs, although there were inadequate data available to determine the actual amount of MOH transfers to NGOs within the past period. For Pathfinder-supported NGOs, LMIS was used and adjustments were made for nonreported transfers. For Packard-supported NGOs, only quantities received were used, as they do not yet have an LMIS in place.</p>

	<p>DKT: Data used were from monthly sales and stock balance reports from their 16 districts. Quality of data and updating of reports were good.</p>
<p>Role of technical assistance</p>	<p>MOH: Following the design of a contraceptive logistics system for the MOH, DELIVER rolled out training in the new system in June 2003, initially piloting in one zone in each of five regions. By May 2006, over 6,000 providers and health staff had been trained using a cascade approach, covering anywhere from 50 percent (Oromia) to 100 percent (Tigray) of the population in the four major regions. Using UNFPA funding, DELIVER has also helped roll-out ECLS in the western and eastern regions, essentially now including all 11 regions. Regional technical support was expanded to include two logistics coordinators per region for the major regions and two others covering the rest. ECLS activities at the regions have been complemented by active support and technical assistance to the FMOH on CS. DELIVER has been a key player in revitalizing the FMOH-level Technical Working Group composed of various MOH partners in reproductive health; the objective of the group includes coordination and provision of technical support in CS. DELIVER helped implement the work plan of the group, culminating in July 2006 in the organization of a well-received National Workshop on CS. Additionally, DELIVER is an information source for MOH, partners, and donors regarding stock status at the regional and national levels, as well as monitoring the pipeline for contraceptives. More strategic, DELIVER has been a major partner in 2005–2006 in the development of a National Master Plan for Health Commodity Logistics, which aims to significantly reengineer the national supply chain systems for essential commodities in Ethiopia.</p>
<p>Procurement</p>	
<p>Existence and role of the Procurement Unit</p>	<p>The MOH does not usually procure contraceptives, as currently all are donated. Donors include UNFPA, USAID, KfW, and others on occasion. One exception was a recent procurement using KfW funds, where the MOH Pharmaceutical Supply and Logistics Department (formerly PASS) was charged with carrying out the procurement. Usually, the Family Health Department is responsible for placing orders with UNFPA and/or other donors, but they have limited capacity for or commitment to monitoring the pipeline and ensuring product availability (see Role of Technical Assistance section). Severe shortages in contraceptives occurred frequently in 2004 and parts of 2005, while, more recently, significant responses have been achieved in increasing the supply of contraceptives to the country. This has been the result of more aggressive lobbying efforts coupled with the arrival of more a supportive Minister of Health in 2005. In 2006, the MOH even decided to spend an important portion of a procurement fund supported by the World Bank, Canadian International Development Agency, and DFID for the purchase of contraceptives.</p>

APPENDIX 2

ADDITIONAL TABLES

Table 6. Additional Warehouse Assessments

Level/Region	Warehouse Location	Assessment Type/Date	Next Steps
Afar	Semera	Preliminary 03/05	
Amhara	D/Markos	Detailed 07/05; technical proposal available	
	D/Berhan	Detailed 07/05; technical proposal available	
	Gondar	Detailed 07/05; technical proposal available	
	Dessie	Detailed 07/05; technical proposal available	
B/Gumuz	Assosa	Preliminary 03/05	
Dire Dawa	Dire Dawa	Detailed 04/06; technical proposal available	July 2006 fundraising, Health Office, DEL, MMIS
Gambella	Gambella	Preliminary 03/05	
Harari	Harari	Detailed 04/06; technical proposal available	
Oromia	Addis	Detailed 10/05; technical proposal available	
	Dukem	10/04	
	Ghimbi	10/04	
	Jimma	10/04	
	Nazareth	10/04	
	Assala	10/04	
SNNPR	Hossana	Detailed 08/05	
	Arba Minch	Detailed 08/05	
	Mizan Tefari	Detailed 08/05	
Somali	Jijiga	Preliminary 03/05	

APPENDIX 3

CHALLENGES OF THE M&E SYSTEM FOR THE ECLS

Following are a few observations about the M&E data and, therefore, its interpretation.

Reporting of M&E data from ECLS has not been uniform across regions; there are several important reasons for this:

- ECLS training in all regions was cascaded, meaning that the number of sites familiar with ECLS and the use of forms varied month by month and increased with time; a basic criteria for inclusion in the M&E pipeline was whether a site had received training. The different regions/zones completed training at various times (the Amhara region having completed its plan the earliest), while all training was considered complete in all regions as of May.
- Reporting cycles are staggered—consistent with the norms suggested in the ECLS training—such that the number of sites from which M&E data could be obtained varied month by month (e.g., health facilities report every two months). In some regions, reporting was done following an agreed-upon frequency in the zone or region (e.g., facilities reporting monthly along with monthly submission of HMIS forms).
- While the M&E approach was guided by operations research principles, implementation of the M&E data collection tool and of the system for collecting these data was challenging. In most cases, collection of the data was the realm of the DELIVER regional logistics coordinators who were themselves constrained by their inability to be in all places at all times (distances between sites, for instance in Oromia, make it difficult to provide the necessary or ideal coverage). There were mixed results from efforts to encourage woreda-level health facility officials to compile M&E data forms based on existing ECLS information that they would likely have produced. Consequently, each region did try to adopt its approach for collecting required data, also with mixed results. To date, no reliable M&E data are included from SNNP; the presence of DELIVER logistics coordinators in Dire Dawa and Tigray health bureaus (where pipelines are shorter than in other regions) has facilitated direct access to data; Amhara has been the most successful in leveraging health bureau officials at regional, zonal, and woreda levels to collect data; and Oromia, being the largest region, has been challenged with consistently collecting M&E data though it has succeeded in getting support from higher officials to require lower-level facilities to submit the simple M&E forms. In Tigray and Oromia, only cross-sectional data were usable for February and March, respectively.

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