

P.D-AR31-589
48404

ETHIOPIA TRIP REPORT

**A Preliminary Assessment
of the Family Health Sector Logistics**

**Systems in Ethiopia:
Considerations for Project Planning**

November 28 - December 18, 1994

J. Timothy Johnson
Centers for Disease Control and Prevention

Suzanne Thomas
John Snow, Inc.



**Family Planning
Logistics Management
Project**

1616 N. Fort Myer Drive
11th Floor
Arlington, Virginia 22209 USA
Tel: (703) 528-7474
Telex: 272896 JSIW UR
Fax: (703) 528-7480



John Snow, Inc.

Glossary of Abbreviations

AIDSCAP	AIDS Control and Prevention Project
AVSC	Association for Voluntary Surgical Contraception
CBD	Community-Based Distribution
CDC/DRH	Centers for Disease Control and Prevention/Division of Reproductive Health
CPSD	Commodities and Program Support Division
CMS	Central Medical Stores
CYP	Couple Year of Protection
DAC	Department of AIDS Control (Ministry of Health)
DFH	Department of Family Health
DFP	Division of Family Planning
DKT	HIWOT (Condom brand) Campaign Implementing Agency
EC	European Community
FGAE	Family Guidance Association of Ethiopia
FP	Family Planning
FPLM	Family Planning Logistics Management Project (JSI and CDC Projects)
GPA	Global Programme on AIDS
GTZ	Gesellschaft fur Technische Zusammenarbeit (German Government Technical Cooperation Agency)
HIS	Health Information System
HIV	Human Immunodeficiency Virus
IEC	Information, Education and Communication
IPPF/L	International Planned Parenthood Federation/London
JOICFP	Japanese Organization for International Cooperation in Family Planning
JSI	John Snow, Inc.
LMIS	Logistics Management Information System
MIS	Management Information System(s)
MCH	Maternal and Child Health
MOH	Ministry of Health
MTP	Medium Term Plan
MWRA	Married Women of Reproductive Age
NCI	New Concept Incorporated
NGO	Non Governmental Agency
ORS	Oral Rehydration Salts
PASA	Participating Agency Services Agreement
PID	Project Identification Document
PSI	Population Services International
REDSO	Regional Development Services Office
SEATS	Service Expansion and Technical Support Project (JSI Project)
SIDA	Swedish International Development Agency
STD	Sexually Transmissible Disease
TGE	Transitional Government of Ethiopia
UNFPA	United Nations Population Fund

Table of Contents

Acknowledgements	1
Executive Summary	2
I. Places, Dates and Purposes of Travel	
A. Discussions in Kenya	5
B. Discussions in Ethiopia	5
II. Principal Contacts	
A. Ethiopia	6
B. Kenya	7
III. Background and Purpose Statement	7
IV. Family Health Supply and Distribution Systems: General Overview	9
V. The Five Identified Family Health Supplies Logistics Management Systems: Findings and Recommendations	
A. Ministry of Health/Department of Family Health	10
B. The Family Guidance Association of Ethiopia (FGAE)	15
C. EPHARMACOR/Essential Drugs	18
D. HIWOT/DKT	21
E. Ministry of Health (MOH)/Department of AIDS Control(DAC)	
1. Condom Supply	21
2. STD Drug Supply: AIDSCAP	21
VI. The Transitional Government of Ethiopia Regionalization Process: Implications and Considerations for Family Health Logistics Management Activities	
A. Headquarters Level Issues and Needs	23
B. Regional Level Issues and Needs	23
VII. Estimated Contraceptive Consumption: Quantities, CYPs and Costs	
A. Establishing a Baseline Level of Use	27
B. Projected Annual Program Growth Rates	27
C. Contraceptive Cost Estimates	28
D. Couple Years of Protection	28
E. Trends in Contraceptive Use and Contraceptive Prevalence	
1. Medium Variant	29
2. High Variant	29
F. Anticipated Contraceptive Costs	30

VIII.	Non-USAID Donor Involvement in Family Health Logistics System Strengthening	
A.	International Planned Parenthood Federation	31
B.	United Nations Population Fund	31
C.	Swedish International Development Agency	32
D.	European Economic Community	32
E.	The World Bank	32
F.	World Health Organization/Global Programme on AIDS	33
G.	AIDS Control and Prevention Project (AIDSCAP)	33
H.	The Royal Embassy of the Netherlands	33
I.	Gesellschaft fur Technische Zusammenarbeit (GTZ)	34
J.	Others	34
IX.	The Role of the Private Sector	36
X.	Policy Considerations and Dialogue in Light of the New Population Policy	36
XI.	Future Activities for Logistics Management	37

Tables

TABLE 1	Medium Variant -- All Ethiopia Contraceptive Consumption Estimates	39
TABLE 2	Medium Variant -- Region "X" Contraceptive Consumption Estimates	40
TABLE 3	High Variant -- All Ethiopia Contraceptive Consumption Estimates	41
TABLE 4	High Variant -- Region "X" Contraceptive Consumption Estimates	42
TABLE 5	Medium Variant -- Estimated Cost Per Year for Contraceptives Required for All Ethiopia	43
TABLE 6	Medium Variant -- Estimated Cost Per Year for Contraceptives Required for Region "X"	44
TABLE 7	"Price List " Estimates for Future Years	45
TABLE R-1	"Medium" Program Growth Annual Percentage Projection Rates	46
TABLE R-2	"High" Program Growth Annual Percentage Projection Rates	47

TABLE CP-1	Medium Variant -- Contraceptive Prevalence Estimates and Estimated CYP for Region "X" and for All Ethiopia	48
TABLE CP-2	High Variant -- Contraceptive Prevalence Estimates and Estimated CYP for Region "X" and for All Ethiopia	49

Attachments

One	Terms of Reference
Two	Diagram of MOH/DFH Logistics System
Three	Logistic System Design Workshop Agenda (Sample)
Four	Diagram of FGAE Logistic System
Five	FGAE Forms
Six	Diagram of Epharmicor Logistic System
Seven	Form for STD Drug Reporting (AIDSCAP)

Acknowledgments

We wish to express our gratitude for assistance received during our initial visit to Ethiopia. While our efforts to understand the logistics systems of Ethiopia were helped by many contact persons, and key individuals at USAID and other agencies helped us to focus our findings to provide project recommendations, we wish particularly to thank Ms. Wuleta Betemariam for her contributions and Dr. Vic Barbiero both for releasing Ms. Betemariam for this work, and providing us a sounding board for our findings.

Executive Summary

An initial, joint Center for Disease Control and Prevention (CDC)/John Snow, Inc. (JSI) Family Planning Logistics Management (FPLM) Project consultancy was undertaken with the purpose of helping the Transitional Government of Ethiopia (TGE) and USAID/Addis Ababa preliminarily identify needs in the area of improving the quality of services and better integrating headquarters and regional family health logistics systems. The consultants, working with the TGE Ministry of Health (MOH), USAID/Addis Ababa, and other interested parties, identified existing logistics systems and determined the degree to which they function through interviews with personnel at all levels of the systems, reviewed existing Logistics Management Information Systems, proposed possible solutions for both headquarters and regional levels, identified donor-related issues that affect family health commodities supply systems, identified those areas and system components that need in-depth assessment and follow-on technical assistance in logistics management, and prepared contraceptive forecasts and their related implications through the year 2000. We debriefed with both the Mission and the MOH/Department of Family Health (DFH); their comments have been incorporated into this report. Drafts of all documents prepared were left with the Mission and the MOH, from whom additional comments were solicited prior to the finalization of this report. An exit interview to discuss subsequent steps and timetables was also held with USAID staff.

Recommendations for the MOH/DFH

1. Donors to the MOH should enter into discussions regarding the taxation regulations for donated commodities.
2. As part of the regionalization process, regional level management capacity should be strengthened. Beginning steps should include a complete inventory of governmental health sector vehicles and their uses -- intended and actual -- in all regions.
3. The current system of stores management for the DFH is inadequate. In order to bring these facilities up to an acceptable standard, we recommend several specific steps.
4. A systems design workshop should be held for the staff of the DFH, to which representatives from other concerned organizations and agencies would be invited to participate. Technical assistance, given CPSD concurrence, is available from FPLM.

Two products would result from such a workshop:

- a) A publication of the proceedings, and

b) A detailed procedures manual documenting the newly designed system. This procedures manual would be written by the MOH/DFH staff, with technical assistance if desired.

Recommendations for the FGAE

1. As the FGAE is intensely involved in the training of MOH/DFH workers in family planning activities, the mechanisms by which they obtain contraceptives from their respective headquarters should be the same. The FGAE should be invited to attend as full participants and decision-makers in any logistics system redesign activities that the MOH/DFH sponsors.
2. Reports of the level of activities occurring at the FGAE should be made to the TGE central statistical office, which has responsibility for monitoring trends in family planning, so that a national picture of trends can be obtained.
3. In order to coordinate supply levels and maximize the impact of donor funding, the FGAE should be made a full participant in any donor coordination activity related to the family health supplies.

Recommendations for AIDSCAP

1. The Essential Drugs Policy is being rewritten, and is anticipated to include a redefined LMIS. Therefore we recommend that AIDSCAP *not move forward with the development of any new forms and/or record-keeping systems* for use in the health care setting in Ethiopia.
2. In order to gather required dispensed-to-users data about STD treatment drugs, AIDSCAP should support small scale spot-checks and record reviews of their clinical service focus sites.
3. National guidelines for drug management should be adopted. If these guidelines are unclear or inadequate, AIDSCAP -- and any other donors working in the areas of HIS/MIS -- should work through the official channels to alter and improve recording and reporting.
4. Any agency that wishes to assist in improving data collection and management should work through the DFH Headquarters Statistics Unit so that forms and other data collection tools are simplified and consolidated, thus reducing the burden on the health care worker.

Recommendations for Regional Implementation

1. **At least one person from the regional level should be trained in the principles of logistics management at the same time as, or prior to, the training of headquarters staff. This type of training is available through FPLM.**
2. **Persons to participate in the systems design workshop from the targeted region should be identified. As the MOH/DFH has a multi-tiered system, all of these levels should be represented: headquarters, regional, zonal and service delivery level storekeepers, service providers, and community-based workers.**
3. **FGAE, the MOH/DFH and the MOH/DAC should agree, in this selected region, to adopt and use the same logistics management system.**
4. **Selected parties from the regional level should participate with headquarters staff in the documentation of the developed system.**
5. **Training of trainers in the principles of participatory training methodologies, including curriculum design, must occur at the regional level. Assistance in this type of training of trainers is available through FPLM.**
6. **The identified trainers should then be trained in the principles of logistics management and be introduced to the Ethiopia-specific system. Training for these identified trainers in the principles of logistics management is available from FPLM.**
7. **A training plan should be developed by the trainers for the introduction of this new system to all levels throughout the targeted region. This plan should include budgets, number and types of participants for each session, and the type of curriculum required for each level of the logistics system.**
8. **In order for this system to function, resources need to be devoted by both the project and the TGE. These resources include:**
 - a. **Dedicated staff for the management of supplies, including their delivery, day-to-day management, ordering and reporting to the central level.**
 - b. **An adequate quantity of preprinted forms and other supplies (e.g., pens, folders, stationery) for the health care worker to utilize the system.**
 - c. **Dedicated staff for the supervision of the service delivery sites in the region.**

I. Places, Dates and Purpose of Travel

The USAID-funded FPLM Project, at the invitation of G/POP/CPSD, G/H/AIDS and USAID/Addis Ababa Mission, sent a joint CDC/JSI team to Ethiopia to assist the Transitional Government of Ethiopia (TGE) and USAID/Addis Ababa in assessing the country's logistics management strengthening needs. Dr. Timothy Johnson, Chief, Program Services and Evaluation Section, PSDB/DRH was the consultant from the CDC. The JSI/FPLM consultant was Ms. Suzanne Thomas, a Logistics and AIDS Program Advisor. Dr. Johnson's participation was funded under the Participating Agency Service Agreement (PASA) between USAID and CDC/DRH. The dates of travel were December 2-17, 1993. The visit to Ethiopia was preceded by a two-day visit to Nairobi, Kenya for discussion with regional staff headquartered there.

It is expected that some of the activities recommended by the consultants will be implemented prior to the initiation of the anticipated USAID-funded bilateral project that is scheduled to commence in the fourth quarter of 1994. The remainder of activities agreed upon by USAID/Addis Ababa and the TGE will be implemented under this bilateral agreement.

A. Discussions in Kenya

The primary purpose of the two-day visit to Nairobi was to meet with the AIDSCAP Regional Office for Africa in order to discuss with them activities that they have underway in Ethiopia, and to determine what logistics assistance the AIDSCAP Regional Logistics Advisor felt that AIDSCAP/Ethiopia could benefit from. We identified key persons with whom we might speak in Addis. In addition, discussions were held with REDSO staff to determine USAID priorities in Ethiopia, where population and health assistance is just getting underway after a long period of non-involvement by USAID.

B. Discussions in Ethiopia

As USAID/Addis Ababa is concentrating on strengthening family health services in the public sector and those agencies and organizations collaborating with the public sector, our meetings were held primarily with various agencies within and directly related to the MOH. To give a broader view of the entire situation in Ethiopia we also met with as many other agencies as possible working in family health activities. These included NGOs that offer services free of charge to the public, and groups that are operating with cost-recovery mechanisms.

II. Principal Contacts

A. Ethiopia

USAID/Addis Ababa

1. Dr. Victor Barbiero, Health, Population and Nutrition Officer
2. Ms. Wuleta Betemariam, University of Michigan Population Fellow
3. Dr. Margaret Bonner, Mission Director
4. Mr. Walter North, Deputy Mission Director
5. Dr. Carla Barbiero, Program Development Officer
6. Mr. Bill Douglas, Program Development Officer
7. Mr. Sam Taddesse, Consultant, Monitoring and Evaluation

TGE Ministry of Health (MOH)

1. Mr. Abate Gudunfa, Head, FHD
2. Mr. Mequament Tesfu, Team Leader for Training and Evaluation, FHD
3. Mr. Philipos Petros, MOH/DFH Stores Manager
4. Dr. Mengistu Mehmet, Program Manager, DAC
5. Mr. Girma, Deputy Program Manager, DAC
6. Mr. Yohanes Tadesse, Head, Child Health Team, FHD
7. Mr. Seyoum O. Selamie, Statistics Director

Family Guidance Association of Ethiopia (FGAE)

1. Dr. Wondayehou Kassa, Executive Director
2. Dr. Taye Tokon, Medical Director
3. Mr. Araya Demissie, Director of Programmes
4. Mr. G. Egziabher Bezabih, Head, Purchasing and Store

Regional TGE Staff, Southern Region (Region 7)

1. Dr. Lamisso Hayesso, Head, Health Bureau
2. Dr. Sahlemariam Gebresenbet, AIDS Coordinator
3. Mr. Berhanu Endeshaw, FGAE Acting Coordinator
4. Sr. Elfinesh Debela, FGAE Clinic, Awasa
5. Dr. Lensamo Yeta, Head, Awasa Health Center
6. Mr. Negussie Tuta, Acting Manager, Epharmicor, Southern Branch
7. Mr. Zerimen Damessa, Sidamo Unicef Store
8. Mrs. Karin Bylund, Midwife-trainer, Wondo Genet Health Center (Swedish Philadelphia Mission)

Others

1. Mr. Carlos Ferrero, Country Director, PSI
2. Ms. Karen Otsea, Program Associate, Africa, IPAS (Carborro, N.C. Office)
3. Ms. Diane Altman, CARE (Consultant)
4. Ms. Susan Rich, Population Action International (Washington Office)
5. Dr. Rogelio Fernandez-Castilla, UNFPA Country Director
6. Mr. Ahmed Husain, President, NCI (Washington Office)
7. Mr. Shifferaw Taye, NCI (Addis Ababa office)
8. Ms. Mulunesh Tennagashaw, AIDSCAP-Ethiopia
9. Mr. Mohan C. Johari, WHO/GPA
10. Dr. Willem I.H.E. Eijgenraam, GTZ Advisor, MOH
11. Mr. Abhay Deshpande, World Bank

B. Kenya

REDSO

1. Ms. Joan LaRosa
2. Mr. J. Ray Kirkland
3. Dr. Richard Sturgis, Personal Services Contractor

AIDSCAP (Africa Regional Office)

1. Dr. Godfrey Sikipa, Regional Director
2. Dr. Debrawerk Zewdie, Deputy Director
3. Mr. Rukarangira Wa Nkera, Regional Logistics Advisor
4. Ms. Janet Hayman, Program Officer

POPULATION COUNCIL

1. Dr. Ayorinde A. Ajayi, Regional Director

III. Background and Purpose Statement

Ethiopia has recently emerged, after a long period of civil strife, as a country to which USAID/Washington wishes to give high priority in the health and population sectors. Contraceptive prevalence is low, with recent estimates that fewer than 4% of all women of reproductive age use modern methods of contraception. The rate of natural increase is about 3%, and the population is already large, at about 54 million people. As total fertility is heavy, around 7.9, women are exposed to a high burden of health problems associated with early and late child-bearing, short birth intervals, and low frequency of antenatal, partum and post-partum care.

Ethiopia is also a country with a high incidence and prevalence of sexually transmissible diseases (STDs) including the virus that leads to the onset of AIDS -- HIV. Due to under-reporting and low access to health care, reported figures on new infections and prevalence underestimate the extent of the epidemic. A weakened health structure, the stigma attached to this infection, and the myriad of other diseases that present with AIDS all contribute to this problem. However, there is enough evidence through small samples and other means to indicate that the epidemic is spreading at such a rate that this is of great concern to the TGE.

Given the health risks faced by the reproductive health age population, USAID/Addis and the MOH have determined that priority should be given to developing a project that integrates activities aimed at reducing fertility through increasing the use of modern contraceptive methods and reducing the incidence and prevalence of STDs, primarily HIV.

G/Health/AIDS, G/POP/CPSD and USAID/Addis Ababa determined that, for the activities in the conceptualized bilateral project to have adequate support, CDC/JSI FPLM should conduct a joint visit to assess preliminarily the logistics systems that play a role in supporting interventions in health and family planning.

The terms of reference for this visit are found as Attachment One. In summary the consultants were asked to:

- 1) identify and describe health and family planning logistics and distribution systems that might play a role in interventions designed to increase contraceptive prevalence and reduce the level of STDs;
- 2) propose activities for strengthening components that have such a need;
- 3) determine the types of activities that the Mission might support, either through their upcoming bilateral family health project, the activities of an already active cooperating agency (CA) such as PSI or AIDSCAP, or activities that might be undertaken by a centrally-funded contract prior to the implementation of bilaterally-supported activities;
- 4) outline plans for agreed-upon technical assistance with the ultimate goal of capacity building within the TGE and indigenous NGOs, and self-sustainability of both types of organizations; and
- 5) estimate reasonable levels of contraceptive requirements for the next seven years, the cost implications of these projections, and their implications for estimating couple-years of protection (CYP), and contraceptive prevalence.

IV. Family Health Supply and Distribution Systems: General Overview

Meetings and discussions were held with persons listed in Section II to identify systems and agencies that deliver supplies for, and collect information related to, family health activities in Ethiopia.

There is no single system that manages all family and/or reproductive health supplies in Ethiopia. We found that none of the five systems identified functions at a level adequate to meet the needs of the agencies or populations to be served, though some perform better than others. Further, it is virtually impossible for these systems to coordinate with one another, given that they are not only functioning poorly but are also completely dissimilar in conceptualization and structure. Nor do any of these systems have a documented (i.e., written) system of procedures so that continuity can be maintained in the case of staff turnover. Coordination is also hampered by this lack of documentation.

The five formal systems that we identified are: 1) MOH/DFH, 2) Family Guidance Association of Ethiopia (FGAE), 3) Epharmicor/ Essential Drugs, 4) HIWOT/DKT social marketing program, and 5) the MOH/Department of AIDS Control(DAC).

With this many distribution agencies and systems, one might consider that these could be consolidated into fewer systems for cost-savings and greater efficiency. Though this may be true, it was expressly stated to us by Mr. Abate, the Head of the Family Health Department, that such a consolidation would be premature at this time. The TGE is in the process of regionalizing many activities and transferring responsibilities from the headquarters level to the newly designated regional levels; no one system functions well enough to serve as a base onto which other components can be grafted. Therefore, Mr. Abate feels that the strengthening of the logistics management system of the DFH should be a priority. Until there has been demonstrated success on the part of Epharmicor or another delivery mechanism for the handling of family health supplies, their management should rest with the DFH. Though the strengthening of several identified weaknesses in the DFH logistics management system may be considered a stop-gap measure, it is likely that the services of this system will be required for an extended period of time until the redefinition of the Essential Drugs Policy is complete and regionalization of all activities has demonstrated some level of success. This intermediate need makes resource input to the DFH well worthwhile. In addition, due to the severe shortage of trained logistics staff, should the DFH supplies management unit be merged with those of any other institution, trained staff from the DFH will be needed.

V. The Five Identified Family Health Supplies Logistics Management Systems: Findings and Recommendations

A. Ministry of Health/Department of Family Health

The MOH/FHD is a multi-tiered system (See Attachment Two, a diagram of this system). UNFPA, currently the primary donor of supplies to the DFH, consigns donations directly to the UNFPA Country Resident Representative, who in turn transfers them to the MOH/FHD central stores. From there, goods pass through the regional/zonal stores, to the district, health centers and hospitals, health stations, community health service facilities, and ultimately to the end user.

Due to registration and taxation regulations, donated commodities for the TGE must first be consigned to the donating agency before they are transferred to the MOH or other recipient. Direct consignment to a governmental agency means subjection to high tariffs, which would make it impossible for these goods to be brought into Ethiopia.

When there is an emergency -- i.e., a near or actual stock-out -- the DFH may make an emergency request through the FGAE.

There is one stores manager at the Headquarters level to manage the entire supply process.

In the one region visited, the current regional store previously served as the zonal store. However, with regionalization, some zonal stores may be converted to regional stores. Some regions lack any storage facility and rely on ad hoc arrangements. Though the building of regional stores was originally programmed in the current World Bank Family Health Project, this activity has been dropped entirely. Given the lack of regional storage capacity, there may be many instances of regions that are unable to implement health programs due to the lack of infrastructure. (World Bank findings are further discussed in Section VIII, C.)

1. *Transportation*

Transportation of supplies from the port to the UNFPA and from there to the MOH/DFH stores is done via vehicles from the Transportation Division of the MOH. Transportation between all other levels is not formalized, as some regions have transportation dedicated to family health, while others do not. Even regions with transportation may consider family planning and other reproductive health issues are low priorities relative to other health and development issues, and transport for commodities for these activities may be, in reality, unavailable. In some regions, it is uncertain whether transportation will be available or not in the near future, as regionalization makes this issue unclear. Transportation that is already in existence at a particular locality may in fact be under the jurisdiction of the zone and not the newly organized region.

2. Storage

The DFH has two storage facilities. One, entirely adequate, serves as the primary store and was recently refurbished with funds from Swedish International Development Agency (SIDA). There is plenty of space for the current supply level and for the immediately anticipated increases. It is secure and cool, and is situated in the same compound as the DFH supplies manager's office.

The secondary facility, geographically remote from the primary facility, is completely inadequate for storage by any standard. It is unsafe, insecure, and is certain to compromise the quality of supplies stored there for *any* period of time. There is no need for this secondary facility as, with some minor reorganization and the addition of shelving, all family planning supplies could be managed from the primary facility. In addition, the rental of the secondary store is expensive, with figures quoted from 2,000 to 3,000 birr per month, which could pay for a much needed supplies assistant at the primary facility.

3. Inventory Control System and the Logistics Management Information System (LMIS)

The DFH supplies manager described to us the "pull"¹ system alleged to be operating in this department. Each level is supposed to calculate its order quantity and submit this to the next higher level along with their reports. Ordering and reporting are to occur monthly from the lowest levels, quarterly from the Regional level to Headquarters, and semi-annually from the Headquarters stores manager to DFH managers, who in turn interact with suppliers (e.g., donors).

There are several standard forms that the Headquarters stores manager completes in the process of filling an order from the Regional level. In addition to the four-page semi-annual reporting and ordering form, he also has a standard series of forms called Models 19, 20, 21 and 22. He is responsible for transcribing data from one form to the next, which he described as being accomplished in the following manner:

- 1) The Regional order, placed on the four-page format, is transcribed onto Model 20, which is an order form that, once completed, means that the order from the region has been approved. During this process, the order quantity may be modified by the stores manager. The basis on which modifications are made was not clear, though it is related to stock on hand at either the ordering facility or the Headquarters level; some consideration may be given to

¹ A "pull" system is one in which the ordering facility is responsible for calculating their order quantities, which they the order through the appropriate channels. This is in contrast to a "push" system, in which the supplying facility calculates the order quantity for the receiving level, using information from the receiving facility for calculating the order quantity required.

previous orders and reports.

- 2) Information from Model 20 is transferred to Model 22, which is the packing list. Quantities packed may not be what is on the approved request, Model 20, depending on supplies available, and perhaps space available for transportation.
- 3) Model 21, the delivery order, is completed, authorizing the packed commodities to be delivered to the requesting facility.
- 4) Model 19, the receipt list, accompanies the delivery order -- i.e., Model 21 -- which will be verified by the receiving facility or agency.

We were told that all of these forms were completed in triplicate which, if transferred appropriately, would give some level of accountability to the system through the cross-checking of amounts ordered, packed, issued and received.

However, a review of the formats indicated that the system cannot function as it was verbally described. No single form is intended to exist in more than duplicate. Though there are written instructions on each form, there is no written set of instructions or guidelines for the user of these forms as a part of a complete package. These formats were adopted from a financial accounting system in use at the Ministry of Finance, and are inappropriate for the management of supplies. Furthermore, *no individual at any other than the headquarters level could describe any aspect of this ordering and reporting system, even when prompted.*

In the several transfers of data amongst the multiple forms, there is ample opportunity for error. In addition, a review of Headquarters issues data indicated that commodities were periodically being "shoved" through the system, and often bore no relation to the order quantity. This appeared to have happened primarily when supplies were received that either exceeded storage capacity or when stock-on-hand came close to their expiration dates. There were also large quantities of contraceptives -- primarily pills -- that could not be accounted for at all.

There is no system of back ordering at any level of the MOH/DFH, nor were we made aware of any means by which information is passed down through the system to keep the lower levels informed of supply status and its impact on their activities.

4. Ordering and Reporting

Virtually none of the community health service stations report to the next higher level. Though the percentage reporting to the next higher level increases as one moves up through the system, there is clearly such incomplete data that the validity of information is highly suspect. At the Headquarters level we were told that, if the proper reporting format from the

region is not received, then orders are not filled. However, if a Regional representative arrives with an order -- as happened while we were visiting the Headquarters Office -- the Headquarters stores manager will help transcribe the information onto the proper format, allowing the process of the filling of a Regional order to begin.

The Headquarters stores manager told us that, although ordering -- and thus reporting -- may be done at any time, packing and distribution (i.e., pick-up by the receiving facility) was done at two time periods during the year: January and July. In order to accomplish this twice yearly distribution, orders would be saved and then packed in time for distribution. When ready, this would be announced by radio to alert the regions so that they would know when to collect their supplies.

If operational, this system would have both advantages and disadvantages. Minimum stock levels would need to be high at at least the two highest tiers of the system, tying up funds in inventory. This could also lead to expiration of stock. However, this would also lead to a more organized work environment for the Headquarters stores manager. At any rate, issues data indicated that the system does not in reality function as desired; orders, reports and issues are made throughout the year.

We were not made aware of any reporting to the UNFPA or other donors as to the status of their donations, nor did any donor indicate that they requested any sort of feedback from the DFH. This type of reporting will become of special concern as more donors become involved in the supply of family health commodities to the TGE. As some of these supplies may be an expensive proposition (e.g., pharmaceuticals for STD treatment), USAID should be interested in this type of reporting. These systems of accountability are usually found in Essential Drugs Programmes or parastatal entities, but we found no evidence of this in Epharmicor (See Section C, below).

Recommendations for the MOH/FHD

Mr. Abate feels that the strengthening of the logistics system should begin as soon as possible, and not wait for the start of activities under the USAID bilateral. Therefore, USAID/Addis and the TGE should determine which activities to support and under what time frame. We recommend the following:

1. Donors to the MOH should enter into discussions regarding taxation regulations for donated commodities. There would be no revenue considerations for the TGE if the current regulations were relaxed. All this system does as it stands is add an extra level to the logistics management system. This has ramifications for compromising commodity quality and for increasing pilferage, lead time and the work load of staff.
2. As part of the regionalization process, regional level management capacity

should be strengthened. Beginning steps should include a complete inventory of governmental health sector vehicles and their uses -- intended and actual -- in all regions. Information collected should include the number of vehicles, the programs requiring transportation, whether these programs currently own or have access to a vehicle, age of and uses for each vehicle, and the frequency with which these identified tasks, including routine maintenance, do and should take place. Using this information, a rationalized schedule for use and maintenance can be made, with regional transportation management to be handled by the head of the health sector in each region. Good management practices would include a log for each vehicle, clear guidelines on appropriate use, specific instruction for vehicle maintenance, etc.

3. Good storage facilities are essential for assuring commodity quality, facilitating the tasks of the persons working in storage facilities, reducing theft, and maintaining an accurate data on the stock on hand. Based on these criteria, the current system of stores management for the DFH is inadequate. In order to bring these facilities up to standard, we recommend that:

- a) The DFH immediately cease using the secondary, remote facility. Not only is it insecure and unsafe, but the costs for the rent of this facility cannot be justified, especially in light of the fact that there is need for a stores assistant at the primary facility.
- b) In order to accommodate stock that will be moved from the secondary to the primary warehouse, minor adjustments to the physical layout of the primary structure need to be made. Though the framework for shelving is in place throughout the store, most of the frames lack the shelves so that goods can be organized properly. The Headquarters stores manager indicated to us that these shelves are available, and could be installed. With the installation of this shelving, the square footage would be adequate for all family planning supplies. It is likely, however, that as the family planning program grows over the longer term, there will be a need for additional warehouse space.

4. Logistics System Design

A system appropriate for the management of supplies needs to be developed for the DFH. Therefore, we recommend that a systems design workshop be held for the staff of the DFH, to which representatives from other concerned organizations and agencies would be invited to participate. *It is essential at this type of workshop that participants include staff from all levels of the system who have responsibility for managing family health supplies.* A prototype agenda for such a workshop is found as Attachment Three. Technical assistance, given CPSD concurrence, is available from FPLM.

Though the primary audience and beneficiary of this redesigned system would be the MOH/DFH, others ((e.g., NGOs, AIDS program) would be encouraged to adopt a system that is entirely compatible with that of the DFH so that data can be aggregated amongst organizations and information about national trends can be analyzed.

Two products would result from such a workshop:

- a) a publication of the proceedings, and
- b) a draft outline of procedures manual documenting the newly designed system. Eventually, after the workshop, a detailed final manual would be developed by the MOH/DFH staff, with technical assistance if desired.

It would be appropriate, given that this type of activity would be USAID-funded, that this system would first be introduced and tested in the USAID-assisted district.

B. The Family Guidance Association of Ethiopia (FGAE)

This is the oldest family planning agency in Ethiopia, having begun services as an IPPF affiliate in 1966. An illustration of the flow of both commodities and information appears as Attachment Four. Contraceptive supplies are received from IPPF/L, with orders placed annually by the FGAE. The FGAE may request supplies from the DFH in times of shortage. The FGAE currently has only two clinics in operation. FGAE's primary role continues to be the training of governmental and other family planning workers, and the supply of contraceptives to other NGOs that operate outside the formal government system.

Prior to Eritrean independence in 1991, the FGAE operated two clinics in Ethiopia: one in Addis Ababa, where the central stores are located, and the other in Asmara. With Eritrean independence, the Asmara FGAE clinic was lost to the FGAE network. The FGAE, in close collaboration with the MOH, is in the process of improving and expanding a full services MCH-FP clinic in the town of Awasa, in one of the southern regions (Region 7) of Ethiopia.

As the MOH has become increasingly involved in providing quality family planning services in Ethiopia, the FGAE has assisted in this effort through the training of DFH staff, initially nurses. However, until 1988 FGAE was the sole distributor of contraceptives in the country.

In addition to family planning services for a clientele of married women of reproductive age, the FGAE is expanding services to include AIDS education and counselling, and counselling for youth in family planning and STD/HIV prevention.

1. *Transportation*

The FGAE has often stepped in to help the MOH/DFH with the delivery of supplies as well as transporting their own contraceptives from the FGAE central store to the FGAE clinic(s). Transportation needs have, however, been limited for the FGAE due to the small number of service delivery sites. Transportation of contraceptives is either accomplished by vehicles that are managed by FGAE Headquarters, or by the receiving facility itself which may send transport to Headquarters for resupply or other reasons. NGOs and other outlets that receive family planning supplies from the FGAE are responsible for their own transport.

Transportation needs will become more demanding as the FGAE implements plans for developing static clinics at five additional urban sites. These sites are Nazareth, Harar, Jimma, and Gondar. The fifth is the above-mentioned clinic in Awasa, which was originally established by the MOH. In addition to services offered at these sites, the FGAE hopes to have outreach and community-based distribution (CBD) activities at selected venues, which will depend on the level of funding available. Expansion is hoped to continue over the next several years to ten additional peri-urban sites.

As programs targeted at youth and for STD/HIV education expand, and could become quite popular, it is likely that transportation services will be increasingly taxed as the FGAE diversifies both geographically and in scope.

2. *Storage*

The FGAE has its own storage facilities on site at their Headquarters. These are adequate in terms of space and quality for the volume of supplies that are handled by this facility on an annual basis. The head storekeeper is also on site, facilitating the receipt, processing and filling of an order. Space requirements are likely to expand, and this is both acknowledged by and planned for by the FGAE staff. In addition to the main store, there is a small storehouse that serves the working needs of the on-site clinic.

3. *Inventory Control System*

Internally, the FGAE is basically a pull system, with the recipient facility calculating the order quantity. This calculated order is verified by the Purchasing and Stores Head against the last issues voucher. There may be occasions when the order quantity is adjusted at the Headquarters level due to discrepancies found during this verification process or due to the lack of supplies. There is no back order system.

Facilities are free to order whenever it is convenient for them, i.e., when transportation and/or staff are available to retrieve supplies. We were also told that orders are placed by

facilities just as they reach, or just prior to reaching, stock-out, meaning that clients coming to clinics may find no supplies.

IPPF/L submits to the FGAE on an annual basis a budget for activities that the IPPF/L is able to support for the FGAE; working within this budget, the FGAE determines the numbers and types of contraceptives that they will order from IPPF/L. The quantity ordered is determined based on issues from the Headquarters to the lower levels. As this is basically a two-tiered system, and dispensed to user data is submitted with the order, past consumption may be fairly accurate for the FGAE. However, we were told that the annual ordering and delivery schedule of IPPF/L can sometimes lead to both overstocking and stock-outs, meaning that true trends in demand cannot be discerned from issues and/or consumption data. Stock-outs of some items have occurred with sufficient regularity to call into question the program's capacity to accurately predict requirements for any given period.

Since contraceptive prevalence is so low in Ethiopia, the annual IPPF/L budget has not been a constraint in contraceptive supply to the FGAE.

4. *Ordering, Reporting and the LMIS*

The clinical reporting format is neither standardized nor preprinted, leaving the health care worker to draw the columns and blocks for recording, as well as to write the names of the contraceptive brands and supplies on the form itself. Not only does this leave room for error: aggregation and other management tasks related to this data are also made difficult. For example, in order to determine the quantity of a specific item issued, the worker needs to copy client card numbers in a block, with each number followed by a parenthetical statement of how many of each item were issued. Each contraceptive method requires a different record-keeping book.

Copies of forms available from FGAE are found as Attachment Five.

Recommendations for the FGAE

The following recommendations are made in consideration of those that we have already made for the MOH/DFH. From our perspective, it is desirable to strengthen these two systems simultaneously and similarly.

1. As the FGAE is intensely involved in the training of MOH/DFH workers in family planning activities, the mechanisms by which the two groups obtain contraceptives from their respective headquarters should be the same. Though each agency will likely keep their respective Headquarters store, the FGAE should be invited to attend as full participants and decision-makers in any logistics system redesign activities that the MOH/DFH sponsors.

2. **Reports of the level of activities occurring at the FGAE should be made to the TGE central statistical office, which has responsibility for monitoring trends in family planning, so that a national picture of trends can be obtained. Though the exact nature of the reports need to be determined by the FGAE and MOH/DFH in the process of system design, and may require some technical assistance, we recommend that the following types of information be included in these reports:**
 - total of contraceptives dispensed to users in specified time frame
 - total number of clients served by these methods
 - number of facilities in compliance with stocking plan
 - total number of facilities receiving FGAE supplies and total number reporting back to FGAE
3. **In order to coordinate supply levels and maximize the impact of donor funding, the FGAE should be made a full participant in any donor coordination activity related to family health supplies. This way, orders from IPPF/L and other donors can be coordinated, increasing the efficiency of the service delivery system.**

C. Epharmicor/Essential Drugs

Epharmicor is a for-profit parastatal essential drugs agency charged with three major functions:

- 1) **the local manufacture of drugs for consumption in Ethiopia;**
- 2) **the procurement and/or importation of drugs that are deemed essential to the Ethiopian health care system; and**
- 3) **the distribution of drugs that enter the Ethiopia system through this agency.**

Epharmicor manages any drugs for which the supplier and/or distributor are willing to pay for distribution services. Structurally, Epharmicor falls under the domain of the MOH, with the chairman of the Executive Board being the Minister of Health. Contraceptives are not normally handled by Epharmicor unless there is a crisis on the part of another FP agency; Epharmicor may then be requested to distribute the supplies for a fee.

As the national drug policy is being rewritten, it is uncertain how this agency will be restructured. With the regionalization of the TGE, it is even conceivable that each branch could procure and import supplies directly from international sources, though this would imply a large administrative group within each branch, and in fact would not be a wise use

of limited governmental resources from any level of the government.

A diagram of the Epharmicor system is found as Attachment Six.

1. *Transportation*

Supplies that are procured by and consigned to Epharmicor are placed in Central Medical Stores (CMS), and then move through a series of branch and smaller warehouses until they reach the sites where they will be dispensed to users. Epharmicor has its own fleet of vehicles, for which they have maintenance responsibility.

2. *Storage*

The only storage facility in the Epharmicor chain that we were able to visit was the Awasa Regional Branch. This is a large warehouse and compound. Though the warehouse is adequate in terms of size, ventilation, security and other attributes, more attention could be paid to good storekeeping and logistics practices. Goods were not all identified by bin cards, and were not separated. The spot check physical inventory that we undertook -- on supplies other than those for family planning -- revealed that there were discrepancies between the stock cards and the actual inventory.

3. *Inventory Control System and the LMIS*

There is no inventory control system in place throughout the Epharmicor system as far as we could discern. When asked, the Regional Manager felt that setting stock level guidelines and utilizing certain other basic principles of logistics management were unnecessary at any other level than the health unit. Therefore, no records of trends in consumption were kept, no forecasts made, and orders were placed only when the facility was completely stocked out. For some items, this meant that they had been stocked out for long periods, sometimes exceeding a year. If this lack of attention to inventory control exists throughout the essential drugs program, then this system cannot be considered functional for the purposes that it is intended.

4. *Ordering and Reporting/Management Information System*

Orders and reports move from the health units to their respective regional branches, where they are aggregated and sent to the next level. However, since the system does not have an inventory control system and often waits until stocking out before placing an order, it is certain that facilities operate for months on end without the supplies necessary for basic health care. We were told that the new Essential Drugs Policy will include a complete

description of how commodities will be managed in the restructured system, and what the cost component of drug management should look like. The future of Epharmicor is uncertain until this Essential Drug Policy is released, reviewed and enacted

Recommendations for Epharmicor

1. As the future of this system is uncertain and it has not, to date, been handling contraceptive supplies, we recommend that family health activities not be linked to this system in the near future. When and if the capabilities of this group to manage supplies have been established, then it may be possible for it to include the management of family health supplies.
2. In discussions of regionalization of activities, there was sometimes discussion that individual Epharmicor branches would be responsible for their own international tendering. We strongly recommend against this approach, as it would entail both considerable start-up resources and demand a large administrative capacity in each of the 14 regions in Ethiopia. Procurement should be a function that rests with the Headquarters level.

For improving functions of Epharmicor as it is currently configured, and for assisting the DFH activities, we recommend the following:

3. As there is no Regional DFH storage facility for family health supplies in Region 7, the regional head of health sector activities could explore renting space from the Epharmicor Branch Office while a dedicated facility is constructed. Though this would mean that family health supplies would be placed in an Epharmicor facility, the DFH should retain complete control over supplies by:
 - a. Having their own stores manager.
 - b. Giving the stores manager complete access at all times to DFH supplies.
 - c. Physically separating, complete with secure caging, DFH-managed goods from Epharmicor-managed goods.
 - d. Maintaining independent stock records.

D. DKT/Population Services International

This group operates in a social marketing context and, as such, has set up its own system of distribution, resupply ordering and reporting. As they operate through the commercial sector, they also have mechanisms in place for accounting for funds collected and disbursed. Though DKT/PSI has been and continues to be an important partner in the delivery of condoms to populations for AIDS prevention through its HIWOT campaign, and is likely to expand to sales of other contraceptives, this system is not likely to play a large role in implementing the newly designed activities under the integrated family health project and this will not have an impact on the development of the MOH or FGAE logistics systems.

E. Department of AIDS Control (DAC)

1. Condom Supply

The DAC is charged with the distribution of condoms and other supplies related to the prevention and control of HIV infection; the national STD program is also in their domain. Though we were able to hold brief meetings with some WHO/GPA-sponsored personnel at the DAC, we were not able to meet at any length with the DAC Manager or other key MOH staff. The management of condoms is undertaken by the Information, Education and Communication (IEC) unit of the DAC, with whom we were also not able to meet. Though requested, receipts and issues data were not available to us, nor were samples of the forms on which this information is recorded. Therefore, we have no basis on which to make an evaluation of the functionality of this logistics systems, nor can we assess the needs for strengthening this system in the future.

2. STD Drug Supply

The STD Control Program is placed administratively under the DAC, and though unable to meet with Headquarters STD Program Managers, we were able to secure appointments and valuable information from two sources. The first was the AIDSCAP Resident Representative, based in Addis Ababa, and the second was the director of the MOH polyclinic, Sidama Zonal Health Center, in Awasa.

AIDSCAP Activities With a Supplies Management Component

AIDSCAP, from their national headquarters, supplies drugs for STD treatment and equipment and other consumables to upgrade laboratories for STD diagnostic capability. Distribution of these supplies is planned to extend initially to four clinical focus sites, while AIDSCAP will simultaneously work to improve all aspects of the management of the supply of these drugs.

As the focus clinics are primarily polyclinics, it is difficult to ascertain if all the services for which these drugs are dispensed are indeed STD treatment, or if they are used for clients with other diagnoses. AIDSCAP has designed a form (See Attachment Seven) to assist clinics and their project staff in the management of STD treatment drugs. This form is intended to replace an existing service record that service providers find cumbersome, and to supplement an additional, incomplete recording and reporting form that was developed using WHO Guidelines. This new form is scheduled to be field tested the first quarter of 1994; the director of the polyclinic with whom we spoke could cite several deficiencies that he found in the form *prior* to *field* testing. This form would not officially eliminate the other two already in existence, and would merely be a third, inadequate information-gathering tool to be used primarily for the purposes of the project.

Recommendations for AIDSCAP

1. As the Essential Drugs Policy is being rewritten, and is anticipated to include a redefined LMIS, we recommend that AIDSCAP *not move forward with the development of any new forms and/or record-keeping systems* for use in the health care setting in Ethiopia.
2. In order to gather required dispensed-to-users data about STD treatment drugs, AIDSCAP should support small scale spot-checks and record reviews of their clinical service focus sites. These spot-checks should be designed to reconcile issues with receipts and dispensed-to-users data.
3. In the meantime, as the Essential Drugs Policy is finalized, national guidelines for drug management should be adopted. If these guidelines are unclear or inadequate, AIDSCAP -- and any other donors working in the areas of HIS/MIS -- should work through the official channels (e.g., DFH Headquarters Statistics Unit) to alter and improve recording and reporting, with the aim always to reduce the burden on the health care worker and to increase the utility of the data collected for management decisions.

VI. The Transitional Government of Ethiopia Regionalization Process: Implications and Considerations for Family Health Logistics Management Activities

As the process of regionalization is just getting underway in Ethiopia, it is difficult to ascertain all issues that need addressing so that both efficiency in terms of procurement (donation) of supplies and greater autonomy at the regional level are attained. However, it is clear that although Headquarters needs assistance in strengthening their capacity to manage supplies at the national level, immediate consideration must be given by USAID and the

MOH to the utilization of resources that already exist at the Regional level.

A. Headquarters Level Issues and Needs

Due to shortages and to systemic and training constraints, there are too few staff at the DFH Headquarters who can manage all tasks associated with a well-functioning logistics system. These tasks consist of consolidation of storage space, addition of both administrative and warehouse staff, training of key personnel in the principles of logistics management, logistics system design, training of trainers in the principles of participatory training, and subsequent training in the specific logistics system that is determined best for Ethiopian needs. This effort is one that feeds directly into the support of regional activities.

B. Regional Level Issues and Needs: Implementation of a Contraceptive Logistics Management System

As Ethiopia has such low contraceptive prevalence, high STD incidence and prevalence, and other dismal reproductive health conditions, it is important that assistance to improve health status not be concentrated to such a degree at the Headquarters level that serving the population in need at the peripheral level is delayed through several years of project implementation. Therefore, as the Headquarters needs are outlined above, the Regional level should follow the same pattern, and must be addressed simultaneously with those of Headquarters and with the same intensity. As USAID plans, with the concurrence of the TGE, to concentrate their family health strengthening activities in one region, or group of consolidated regions, several considerations regarding the regionalization process should be given to logistics strengthening within the selected region.

As recommended for the MOH/DFH, a concerted effort should be made to design an Ethiopian-specific family health supplies logistics management system. Because the soundest means for the design of such a national system is through the involvement of persons from all levels of the distribution and management chain, persons from all levels from the targeted region(s) would necessarily be invited to participate in a Headquarters system design workshop and in the subsequent documentation of the system. This would result in Headquarters and Regional staff understanding of the system and being capable of managing DFH supplies.

However, in order to increase delivery of family health services -- which requires that supplies be available -- in the selected region, the DFH and USAID should understand that full-scale implementation of this system from the Headquarters level may not be achieved before being introduced at the Regional level. If full Headquarters strengthening were attempted prior to Regional implementation, opportunities for family health service delivery will be lost, thus reducing the TGE's opportunities for achieving at least some of its targets in contraceptive prevalence, fertility reduction and health gains. Therefore, the recommendations outlined below focus on the Regional level, and while not by-passing

Headquarters strengthening needs, do emphasize the need for at least simultaneous strengthening and some specialized and exclusive treatment of the targeted region(s).

Recommendations for Regional Implementation

1. At least one person from the Regional level should be trained in the principles of logistics management at the same time as, or prior to, the training of Headquarters staff. This type of training is available through FPLM.
2. Persons to participate in the systems design workshop from the targeted region should be identified. As the MOH/DFH has a multi-tiered system, all of these levels should be represented: Regional storekeeper, Zonal storekeeper, storekeeper at the service delivery level and the service providers themselves. In addition to offering these trainings and activities to MOH/DFH staff, they should also be offered to MOH/DAC staff, polyclinic staff (if separate from the DFH or the DAC), and to staff from FGAE. A joint design process is more likely to result in a decision for all entities to choose compatible systems.
3. FGAE, the MOH/DFH and the MOH/DAC should agree, in this selected region, to adopt and use the same logistics management system. Unless this is done, it will be virtually impossible to aggregate and monitor trends in the project (region) over the life of the project.
4. Selected parties from the Regional level should participate with the Headquarters staff in the documentation of the developed system (i.e., the development of a procedures manual).
5. Training of trainers in the principles of participatory training methodologies, including curriculum design, must occur at the regional level in order that the introduction of this system can move forward as quickly as possible. Assistance in this type of training of trainers is available through FPLM.
6. The identified trainers should then be trained in the principles of logistics management and be introduced to the Ethiopia-specific system. In order to make this type of training efficient, a group of top level systems managers, Headquarters-based trainers, and Regional level managers should be included in this type of workshop. Training for these identified trainers in the principles of logistics management is available from FPLM.
7. A training plan should be developed by the trainers for the introduction of this new system to all levels throughout the targeted region. This plan should include budgets, number and types of participants for each training, and the type of curriculum required for each level of the logistics system.

8. In order for this system to function, resources need to be devoted by both the project and the TGE. These resources include:
 - a. Dedicated transportation at the regional level. This is necessary to carry orders from the region to the headquarters level, collect supplies and deliver them to the ordering facility, and collect orders and deliver supplies from service delivery sites throughout the region. Time periods for placing and filling orders and for supervision are components of a logistics management system that will be specified in the system design.
 - b. Appropriate and dedicated storage for all family health supplies. In the one region which we were able to visit, there was no regional storage facility. They were currently able to store their supplies in what had previously been a zonal store. However, family health supplies were commingled with others; with an anticipated increase in contraceptive prevalence, the need to maintain certain minimum supplies is pressing. In order to cope with specified delivery schedules, and the increase in other supplies, the storage situation needs to be re-evaluated and infrastructural needs met in this regard.²
 - c. Dedicated staff for the management of supplies, including their delivery, day-to-day management, ordering and reporting to the headquarters level. This staff person will also need to be responsible for the aggregation of data from all sites within the region, and for the supervision of implementation and functioning of the system.
 - d. An adequate quantity of preprinted forms and other supplies (e.g., pens, folders, stationery) for the health care worker to utilize the system.
 - e. Dedicated staff for the supervision of the service delivery sites in the region.

This level of resource input into one region would constitute an experimental situation in the introduction of a completely new, manageable family health supplies logistics management system. If successful, these activities could be replicated on a region-by-region basis, with little dependence on the Headquarters level for other than the determination of national order quantities and source(s) of supplies.

² The upcoming World Bank health strengthening project has dropped the component that was to build storage facilities at the regional level. This issue should be reexamined with the World Bank by USAID Representatives in order to determine whether this can be returned to the set of project activities. See Section VIII C.

VII. Estimated Contraceptive Consumption: Quantities, CYPs and Costs

A set of projection tables of annual method-specific contraceptive commodity requirements follows, as background for the Project Development Team. These tables consist of projections at both a national level and for a hypothetical, predominantly rural region (henceforth designated as "Region X"), which might become the focus for intensive USAID assistance. Region "X" is assumed to have a population of about 12 million people.

Two sets of projections have been prepared for Ethiopia and for "Region X." Both start with our best estimates of 1993 consumption of modern, reversible, supply-based contraceptives. They differ, however, in the subsequent trajectories of annual growth during the projection period, 1994 through 2000. We designate the first set as a "Medium" growth scenario, to contrast it with the low growth in prevalence that would be expected if trends of the past five years were to continue. We consider this Medium variant to be achievable, provided a set of activities is undertaken to expand demand for family planning and disease prevention services, largely through increased and sustained IEC activities, and supported by improved family health logistics systems including assured supply of all methods and an improved service delivery network adequately staffed by well motivated workers.

The second variant is a more ambitious "High" variant, calling for even more substantial, sustained and intensive efforts. This higher level of growth would require higher levels of inputs in demand creation and in service delivery efforts, and a higher level of commitment of resources by both the national and regional authorities responsible for implementing of the national population policy. It would also entail substantially higher inputs by donor agencies and organizations. This higher level of activity would establish a pattern of family planning and health activity which, if subsequently maintained, would set the country well on its way to achieving the lowered fertility called for in the National Policy on Population, released in July 1993. The epidemiological impact of the potential increased condom use was not estimated in this exercise.

While we consider attainment of the "High" variant to be a worthy goal, we recognize the difficulties of its achievement; indeed we recognize that the "Medium" level would represent a considerable and laudable achievement. Since we consider the "Medium Variant" projections to be the more realistic, we used them as the basis for estimating total commodity costs. These costs are broken down by method and year, and also totaled. If indeed the program can exceed the "Medium" expectations, commodity costs would be correspondingly higher. With proper information management, trends in consumption can be monitored closely so that commodity shortfalls will not occur should the program approach the "High Variant" level of success.

For both the Medium and High projections, we also present summary tabulations of projected users for 1994 and 2000. Projected users are defined here in terms of "Couple Years of Protection" (CYP) in these two end years, both for Ethiopia and for "Region X."

A. Establishing a Baseline Level of Use

Good method-specific statistics on contraceptive use do not exist within the family planning service statistics and logistics management information systems found in Ethiopia. However, several sources of information exist which, when examined in concert, can serve to give a reasonable best estimate of 1993 use of modern reversible contraceptive methods.

Our starting point was the "1990 Family and Fertility Survey: Preliminary Report," issued in Addis Ababa in August 1991. This survey, though not truly national in geographic coverage, provides a reasonable set of contraceptive prevalence rates for different population subgroups. Since one of the findings of this survey was that *almost 23 percent of contraceptive practice occurs among women not currently married*, we felt it most appropriate to use *all* women aged 15-49 as our denominator, and therefore the program target. Total contraceptive prevalence in this group was found to be 4.0 percent, of which a little over half comprised modern methods. Since method-specific breakdowns were not given for this category, we applied the distribution which was provided for MWRA, who constitute 71.7 percent of the total population of women of reproductive age.

Since the 1990 Survey also showed wide variations in prevalence between urban and rural areas, and our "Region X" is hypothesized to be even more rural than the already predominantly rural distribution of Ethiopia as a whole, adjustments in the level of initial prevalence were required. Further, adjustments were required for changes, both positive and negative, during the three year interval since the survey. These adjustments were based on a variety of both quantitative data and qualitative observations. These included examination of trends in reported performance and stock issues by the FGAE and the DFH/MOH, by the DKT/PSI social marketing efforts, and by discussions with officials and FP staff both at the Headquarters offices in Addis Ababa and in the Southern Zone. The main adjustments resulting from these sources were an increase in condom use, which has expanded very substantially and is assumed to be due to the interest in disease prevention, and in use of injectables, which has also grown considerably. The latter seems to be largely a result of improved availability of injectables in the past two years. Other methods have shown little, if any, growth during this period.

B. Projected Annual Program Growth Rates

Hypothesized contraceptive use growth rates were set for both the Medium and High projections through consideration of past trends, expectations of what the national program hopes to achieve, and discussions with MOH, USAID, and other government and organizational representatives on actions on which the TGE intends to embark toward achieving of stated goals for fertility reduction and health status improvement. As already noted, both a Medium and a High variant for method growth rates in each year was established. These method-specific growth rates are shown in Tables R-1 and R-2.

The main point to note is that in all cases the projections call for consistent contraceptive consumption increase throughout the projection period for each method. The rates of growth, however, vary substantially between methods. The two highest are for condoms, in which social marketing efforts are expected to continue to result in rapid annual growth, and injectables, for which there is evidence of considerable latent demand.

C. Contraceptive Cost Estimates Basis

Commodity cost estimates for All Ethiopia, Medium variant, were computed on the basis of the "per unit" costs shown in Table 7.

These costs are based, for most methods, on the 1994 USAID procurement costs. For injectables, the price is based on the actual price paid by UNFPA for a recent consignment of DepoProvera® shipped to Ethiopia, as no US price is yet available for this commodity.

The indicated costs are inflated at the rate of 5 percent per annum for years beyond 1994. However, *costs do not include the price of shipping*, which are typically between 7 and 10 percent of the value of the commodity. Shipment by air is considerably more expensive, about 25 to 30 percent of the cost of the commodities. This may be an important consideration in Ethiopia, as it is now a land-locked country.

We note that some of the required stocks for the beginning years of this time period, including substantial quantities of condoms and IUDs, are already in-country or their supply has already been committed by donors, particularly for 1994 and 1995.

D. Couple-Years of Protection Estimation

In order to translate contraceptive use estimates into estimates of "current users", we have applied "Couple-Years of Protection" (CYP) conversion factors to the use estimates. In all cases except condoms, we have applied the standard "default" values recommended by the Program Performance Indicators Working Group convened by USAID. These factors are as follow:

IUDs	1 IUD	= 3.5 CYP
Oral Pills	15 cycles	= 1 CYP
DepoProvera	4 doses (vials)	= 1 CYP
Vag. Foam. Tabs.	150 tablets	= 1 CYP

For condoms, although the "default" CYP factor is 150, representing 150 condoms on average being required to provide one year of protection against pregnancy, we recognized that condom use in Ethiopia is driven in large measure by efforts to combat HIV/AIDS and other STDs. This suggests that it would be more appropriate to double the number of condoms required to provide a year of fertility protection. Consequently, for purposes of this

exercise, we used a conversion factor of 300 condoms per CYP.

E. Trends in Contraceptive Use and Prevalence

Tables 1 and 2 show the commodity consumption expected under the "Medium" variant for method-specific program growth for All Ethiopia, and for Region "X", respectively. Tables 3 and 4 show figures under the more ambitious growth goals of the "High" variant.

Corresponding estimates for total and method-specific CYPs in 1994 and 2000 are shown in Table CP-1 under the "Medium" variant, and in Table CP-2 for the "High" variant.

No implantable method has been included in these estimates as this method has yet to be introduced in Ethiopia. Though this reversible method may play an important role as the program grows and matures, the projected use for the next several years will probably not be significant enough to alter these prevalence estimations to a significant degree.

1. Medium Variant

For All Ethiopia, this variant calls for a near-doubling in estimated users (i.e., CYPs), in the six-year span from 1994 to 2000, that is, from 310 to 599 thousand CYPs. Increases in contraceptive prevalence, however, are somewhat lower than the increases in total numbers of users, at about 57 percent. This lower prevalence increase is due to the very high rate of population growth amongst the entire population, which necessarily includes women of reproductive age, whose 23 percent increase in size partially cancels the otherwise very substantial program growth. This observation highlights the importance of urgent action on the family planning and disease prevention fronts, since the problem grows more critical with each passing year.

2. High Variant

While even the Medium Variant requires substantial redirection of resources, the recognition of the urgency of achieving effective family planning, child-spacing and disease prevention programs, both for their health benefits to mothers and children and for the socio-economic well-being of Ethiopia, led us to present also a more ambitious "High" program growth scenario. This is summarized in Table CP-2. This table shows, for all Ethiopia, a high rate of increasing use among reversible modern method prevalence in the six years from 1994 to 2000. During this period, CYPs would grow under these projections from 329 to 866 thousand, representing an increase of users of 163 percent. Even after adjustment for growth in the denominator, i.e., the population of women of reproductive age, prevalence for these methods, as a percentage of these women, would more than double, from about 2.8 to nearly 6 percent.

Though this 6 percent goal may seem modest, we note not only that this is far higher than currently existing levels, but also the following:

- This calls for rates of program growth unprecedented on a sustained level in any social program to date in Ethiopia. However, *with sufficient political will* translated into necessary program development, it is not beyond reach.
- This contraceptive prevalence rate is based on *all* women of reproductive age. It therefore includes a substantial proportion of women who, at any given time, are not truly eligible to be users. This includes women who are not currently in sexual partnerships, women who have primary or secondary sterility, and women who are currently pregnant or protected by postpartum amenorrhea. If all such women are subtracted from the denominator, the level of effective contraceptive prevalence is seen to rise to close to 10 percent.
- We assume that, concurrent with program growth in reversible modern contraception, efforts will be undertaken to increase the popularity and use of contraceptive sterilization among couples who have attained or already exceeded their desired family size. Similarly, such traditional approaches to fertility reduction as periodic or sustained abstinence from sexual relations may also see some modest increases, partly as a result of an overall more favorable climate for family planning resulting from the government's policies and actions.
- The attainment of this level of growth in the next six or seven years would see Ethiopia embarked on a path of effective family planning and health improvement from which it would be unlikely subsequently to be deterred, so that continued exponential growth in the program could be anticipated beyond the horizons of the present projections.

Regardless of which rate may actually be achieved, *progress will only be achieved through concerted efforts at the Headquarters, Regional, and all other levels of the organizational pyramid* which must ultimately serve the base of that pyramid, the people of Ethiopia. The dividends of concentrated action now will only be seen in the future.

F. Anticipated Costs

Costs of commodities are presented only for the "Medium" program growth scenario, using the unit cost figures shown in Table 7.³ The estimates for All Ethiopia are given in Table 5,

³ The cost of NORPLANT[®] has not been included in these computations. This method is just being introduced and its use will be low. It is important to note that NORPLANT[®] is expensive: USAID and UNFPA both pay about USD 23.00, exclusive of shipping, for each set.

while Table 6 shows corresponding figures for Region "X." As previously noted, if the "High" projections were to be achieved, cost figures would be commensurately higher.

The main points to note are that costs will, naturally, grow steadily and rapidly as the program advances. Program managers must be prepared to ensure timely provision of commodities required to satisfy demand. It is noted that over half the commodity costs are attributable to condom procurement, though this method lags far behind oral pills in the level of contraceptive protection it provides. However, the condom is the only currently available commodity for STD/HIV prevention. Condom costs could be substantially reduced if these purchases were made by donors who could bid for supplies in international markets, leaving donors who can procure other commodities at a lower cost to expend their resources on other methods and activities where they may not be at a competitive disadvantage.

VIII. Non-USAID Donor Involvement in Strengthening Family Health Logistics

We identified several non-USAID donors with an interest in supplies issues, including logistics management. A brief overview of their involvement follows.

A. International Planned Parenthood Federation (IPPF)

It is likely that, with the newly issued TGE population policy and the influx of donor assistance in reproductive health in Ethiopia, the demand for contraceptive services will increase in all service provision agencies in Ethiopia. FGAE staff have defined areas into which they wish to expand, both geographically and from a service modality perspective, and the demand for contraceptives and other family health supplies is likely to grow. In other countries as demand for contraceptives from the local FPA has risen, the IPPF has been unable to supply contraceptives adequate to meet the needs of a particular affiliate. This will undoubtedly become true in Ethiopia as well, forcing FGAE to curtail services, reduce targets, and establish formalized, collaborative relationships with other sources of supplies so that service providers are able to meet demand. This latter option is the most desirable.

B. United Nations Population Fund

UNFPA is currently the primary donor of contraceptive supplies to the MOH/DFH. Currently, UNFPA plans to give USD 10 million to the TGE over the next five years, with 50 - 70 % of this funding to go towards the purchase of commodities. UNFPA is interested in strengthening the contraceptive logistics system, and supported an assessment of this system in late 1990. Other funds support activities being implemented by JOICFP.

The UNFPA recognizes that, with the increase in the number of donors and with the

increased breadth of their activities, both geographically and in scope, the coordination of donor activities is imperative and must be addressed by the MOH/DFH.

C. Swedish International Development Agency (SIDA)

SIDA supports the TGE efforts in reproductive health through a bilateral mechanism, concentrating on IEC activities. In addition, some commodities support is given to the DKT/PSI-implemented HIWOT program in its effort to expand social marketing of condoms and other contraceptive methods. Prior work has included the refurbishment of the Headquarters primary storage facility.

In the past, SIDA has had an MIS technical advisor at the MOH/MCH Division. We believe that this advisor was most active in the redesign of the collection of information related to health status, though we were unable to meet with anyone who could give us a summary of the advisor's activities, nor did we see any reports.

D. European Community (EC)

The EC supplies drugs for STD treatment, but does not engage in logistics system support. Drugs supplied by the EC are consigned to the EC national office and then passed on to the MOH/DAC for management and distribution. Some of these drugs pass through clinics that receive technical assistance from AIDSCAP for improved STD diagnosis and treatment. We were unable to determine the extent of assistance that the EC plans to provide in the future, or how this assistance might be coordinated with other donor contributions.

E. The World Bank

The World Bank recently reconfigured an already existing Family Health Project. This project was first developed in 1990; changes were made in response to the changing political and health delivery situations in Ethiopia. The newly reconstructed project is now national rather than regional in scope, and concentrates on the construction and rehabilitation of primary and basic health centers. The MOH acts as the primary implementing agency for this project. Another strong component of the World Bank-funded activities is one devoted to management capacity building through training and technical assistance.

There is no warehousing or other storage component in this project, nor are there are contraceptives or other family health supplies.

F. World Health Organization (WHO)/Global Programme on AIDS (GPA)

The WHO/GPA has, since the mid-1980s, supplied technical assistance and other resources to the MOH/DAC for the prevention and control of AIDS. Currently, an IEC specialist, a Technical Officer and an Epidemiologist are supported by the GPA to assist the DAC in the implementation of these national program activities.

The WHO/GPA receives funding from a variety of sources for activities that are identified as priority in the immediate and longer terms. For example, the current Medium Term Plan (MTP) calls for the supply and distribution of condoms; the Dutch Government supplies funding to the DAC so that the DAC may go out for international tender to procure high quality condoms at the lowest possible price. Other donors operate much the same way, funding components of the MTP on an annual or other basis. This sometimes makes planning difficult for the DAC and they rely heavily on this WHO/GPA-organized support.

Despite our efforts, we were unable to obtain distribution or use figures for condoms or other supplies, either historical or projected, from this program. Though we were able to meet with some of the staff, these persons were not informed about the commodities aspect, leaving a serious gap in the information available to us for the forecasting exercise that we undertook.

G. AIDS Control and Prevention Project (AIDSCAP)

USAID-funded AIDSCAP implements a variety of subprojects in Ethiopia. As a part of our overall logistics assessment, we also tried to assess the level of logistics assistance required to strengthen AIDSCAP activities from both a Headquarters and Regional perspective. The aspect of their activities related to supplies and distribution is discussed in Section V,E,ii, above.

As implementation of additional AIDSCAP subprojects had not begun at the time of our visit, there was uncertainty whether logistics assistance will be required for their successful implementation. However, it was our impression that these new subprojects were to focus primarily on the education and counselling aspects of HIV issues. Of course, this does not preclude the need for linkages with a condom supply system that is national in scope.

H. The Royal Embassy of the Netherlands

The Dutch Government supplies funds to the WHO/GPA for the funding of condom supplies. (See "F", this Section). In addition, they have recently placed an advisor in the DFH who plans to work at the community level to increase the supply of contraceptives and essential drugs through the establishment of a network of CBD workers. As he had only been in place for about four weeks at the time of our visit, he had not yet formulated a plan for the

receipt, distribution and reordering of supplies that will be essential for success. However, should the MOH undertake comprehensive logistics system design activities, the means by which CBD workers are linked to this system must be specified.

The Dutch have supplied the TGE/MOH with a one year supply of essential drugs for distribution to health stations. These supplies are in the system now. It is not anticipated that this type of donation will be forthcoming on an annual basis from the Dutch.

The Dutch Government also supports, with financial resources and technical assistance, the rewriting of the Essential Drug Policy. This policy, when completed, is intended to outline the means by which essential drugs are imported, distributed and accounted for. However, a draft was not yet available for our review. As family health supplies are currently managed by the DFH through a vertical system, it is not clear that their management will naturally fall under a newly established essential drug policy. Indications given to us were, in fact, that DFH supplies would not be incorporated into this system. Therefore, though ultimately it might be desirable to have all health supplies managed through the same system, for now it is preferable to maintain the autonomy of DFH supplies management.

I. German Government Technical Cooperation Agency (GTZ)

GTZ gives some assistance to the expansion of activities being implemented by DKT. In addition, discussions for future activities are underway with the MOH/DFH.

J. Others

A variety of other donors have begun at least preliminary activities. These include the Italian Government, the Overseas Development Administration of Great Britain, OXFAM, and CARE. All are interested in issues related to supplies for family health.

Recommendations to Donors

Coordination Activities

- 1) All donors cannot supply all contraceptive methods, either due to lack of funding or due to the lack of the ability to purchase particular types of contraceptives. However, many donors are interested in promoting family health activities, and therefore share in the responsibility of seeing that demand generated is met.

Therefore, the MOH/DFH should convene a formal task force of all donors that are dedicating resources to family health commodities supply and/or their management. This group should be chaired by the Head of the DFH or his

representative, and should meet regularly, preferably quarterly. This task force should be charged with the coordination of all aspects of family health supply: sources, shipping schedules, storage, distribution, information management and management decision making. Any additional issues related to the supply and the coordination of activities should be brought to this group for resolution or referral to the appropriate body within the MOH.

Forecasting Assistance in Family Health

- 2) a. USAID/Addis Ababa should take the lead in organizing an initial "Contraceptive Procurement Table" (CPT) exercise.⁴ Though historically the CPTs have been associated with USAID, the CPTs should serve as a medium for discussion and agreement among all suppliers concerning a program's total needs. CPT preparation involves forecasting of consumption and estimation of programmatic requirements. It helps to identify where shortfalls may be likely to occur over a period of several years and where the lowest possible prices for particular contraceptives can be obtained, and can help donors and other procuring agents plan shipping schedules. This greatly assists the Headquarters level in determining what quantities of goods will be available at what time for their programs and how donors should jointly organize their contributions. Ideally, data for this exercise should be gathered and maintained on a regular basis, and the resulting estimates reviewed and revised as necessary. Technical assistance is available for both the initial exercise and the transfer of the capacity to undertake this without assistance from FPLM, with concurrence from USAID/W. It is preferable that this process be managed within Ethiopia so that needs can be continuously reviewed and adjustments made as necessary to order quantities, sources, or shipping schedules. Though CPTs can be done in a data-poor environment, it is essential to remember that the better the available data, the better the quality the forecast is likely to be. Therefore, an improved LMIS will facilitate this process.
- b. The CPT provides a format whereby information is organized for all potential donors. This information can be used for negotiation amongst a group of donors as to who will provide what commodities for the best interests of the Ethiopian programs.
- c. A similar sort of exercise should be undertaken with appropriate parties to estimate requirements and plan for procurement of other key family

⁴ The 1994 "Contraceptive Procurement Table Guidance", prepared by USAID/G/POP/CPSD, describes the purpose of the CPT. Copies of the CPT Guidance are available through either G/POP/CPSD or FPLM.

health supplies.

Others

- 3) Involved donors should assist the MOH/DFH in the implementation of a national physical inventory in order to determine the level of supplies available and what needs to be removed from the system or transferred to other service delivery sites. Such an inventory could be broadened to include other supplies besides contraceptives, such as vehicles, pharmaceuticals, and family planning supplies.
- 4) All donors should discuss with the World Bank the possibility of adding, for those regions where there is a lack, a project component for the construction of regional stores in order that true regionalization of family health activities can be undertaken. This infrastructural development cannot be encouraged enough.

IX. The Role of the Private Sector

Currently the largest suppliers of family health/family planning supplies are the MOH/DFH, the FGAE and DKT. Both the FGAE and DKT implement programs that have a cost recovery component; both recover only a fraction of actual costs from users. Though there seems to be some truly private sector activity in Ethiopia, this also may be, in its own way, "subsidized." Many of the brands of contraceptives and other health supplies that were found in private sector shops were those that are intended for distribution through the public sector. This observation, not quantified, strengthens the argument that controls in the public sector need to be tightened. In addition, some upper limit to the supply of free commodities from the public sector -- which would need to be determined after further study -- needs to be set. Otherwise, the public sector pipeline "expands" through leakage to external channels, and stifles the private sector potential.

X. Policy Considerations and Dialogue in Light of the New Population Policy

From such a low level of contraceptive prevalence, and with such a rapidly growing population, there cannot be expected to be tremendous gain in terms of percentage gains in contraceptive prevalence during the first few years of expanded activity. One can expect, however, a large increase in the sheer number of users. The TGE should not set themselves and their health care workers up for disappointment by establishing unrealistically high targets which cannot be attained in a short time span. Rather, ambitious yet realistic trajectories for planned program growth backed by required resources and infrastructural

changes need to be established.

The ambitiousness of the policy also underscores the need for a great deal of collaboration and coordination amongst donors and implementing agencies.

The most critical need is to get services started at the point of user contact, rather than spend extensive initial effort in developing central systems prior to strengthening regional capacity. This argues for a simultaneous thrust, with sustainability issues to be considered as lessons are learned about what works at the lower levels and what doesn't in terms of increasing access to health services and altering the health seeking behaviors of potential clients.

The introduction of improved and new methods of contraception can only be expected to aid the success of the family planning program in Ethiopia. However, with their introduction comes the need for training in particular attributes of the method so that the provider can adequately meet the needs of the client. We have a particular concern with NORPLANT[®], as this is a reversible method which takes particular training and skills on the part of the provider to provide reversal upon request. Therefore, prior to introduction of the method, providers should be adequately trained in both the insertion and removal of the implant so that there is not any backlash on the part of clients based on negative experiences with the quality of care received. Additionally, donors of this method should ensure that supplies necessary for the removal of implants are provided in adequate quantities.

XI. Priority and Future Activities for Logistics Management

Discussions with Headquarters, Regional, and Service Delivery staff, including managers of supplies, led us to recommend the following activities as of the highest priority for strengthening logistics activities. If started quickly enough, and with adequate support from the MOH, on an ambitious calendar, these activities could be considered as potential bridging activities prior to the implementation of the proposed USAID-supported family health project. These activities are to be targeted at both the Headquarters and Regional level simultaneously, and are listed in order of both priority and sequence of implementation. This list was reviewed with both USAID/Addis Ababa and DFH staff prior to our departure. Their comments are incorporated.

- 1) The DFH should add a storekeeping assistant and other support staff at the Headquarters level so that this level can efficiently manage family health supplies. Currently there is one stores manager with no clerical or warehousing support. This should be done *prior* to the donation of additional contraceptives.
- 2) The storage facilities *must* be upgraded. USAID should ensure that this is completed prior to the arrival of any supplies for project activities.

- 3) An appropriate Ethiopia-specific contraceptive and other family health supplies logistics management system must be designed and implemented. For this, we have proposed that a problem identification and logistics system design workshop be held (See Section V,A). Prior to this workshop, as even the Headquarters Level Stores Manager has had no training in logistics management, it would be extremely beneficial to have persons from both Headquarters and Regional levels trained in the principles of logistics management *prior* to this systems design workshop. (See Attachment Three for sample agenda.)
- 4) Documentation, in the form of a procedures manual, of the newly designed logistics system should be drafted. This would ideally be done by a team from the DFH, with the assistance of technical advisors.
- 5) Training of trainers should be conducted from within the DFH, the DAC and possibly the FGAE in the principles of training methodologies. These trainers would in turn be trained in the Ethiopia-specific logistics system.
- 6) A national training strategy should be devised and a time frame developed for implementing this training plan. The selection of the training strategy should be made by the DFH in consultation with USAID/Addis and other funding agencies. Assistance in development of an appropriate strategy is available from FPLM.
- 7) To assist in the forecasting of condom requirements, a single or a series of small scale surveys could be undertaken of men, purchasers of condoms from retail outlets, and service delivery sites. Though a DHS is planned for in 1995, this intermediate step would be invaluable in beginning to improve the quality of condom forecasts.

These steps, which likely would carry over into the beginning stages of the USAID-supported Family Health Project currently in development, would be the beginnings of the institutionalization of the capacity of the TGE/MOH/DFH to manage their family health supplies.

TABLE 1

Medium Variant -- All Ethiopia

Estimated Contraceptive Consumption for Ethiopia,
based on Best Estimates of 1993 Usage, and
Estimates of Annual Percentage Increases
in Use for Each Method
(Figures are in Thousands)

METHOD	1993	1994	1995	1996	1997	1998	1999	2000
Oral pills	3000	3300	3795	4175	4592	5051	5304	5569
IUDs	7	7.7	8.5	9.3	10.2	11.3	12.4	13.7
Injectables	40	50	63	78	94	113	130	143
VFTs	120	126	132	139	146	153	161	169
Condoms	12000	15000	18750	22500	27000	32400	37260	42849

TABLE 2

Medium Variant -- Region "X"

Estimated Contraceptive Consumption for Region "X"
based on Best Estimates of Annual Percentage Increases
in Use for Each Method
(Figures are in Thousands)

METHOD	1993	1994	1995	1996	1997	1998	1999	2000
Oral pills	450	495	569	626	689	758	796	836
IUDs	1	1.10	1.21	1.33	1.46	1.61	1.77	1.95
Injectables	6	7.50	9.38	11.72	14.06	16.88	19.41	21.35
VFTs	15	15.8	16.5	17.4	18.2	19.1	20.0	21.06
Condoms	1350	1688	2109	2531	3038	3645	4192	4821

TABLE 3**High Variant - All Ethiopia**

**Estimated Contraceptive Consumption for All Ethiopia,
based on Best Estimates of 1993 Usage, and
Estimates of Annual Percentage Increases
in Use for Each Method
(Figures are in Thousands)**

METHOD	1993	1994	1995	1996	1997	1998	1999	2000
Oral pills	3000	3450	3968	4563	5247	6034	6939	7980
IUDs	7	8.1	9.3	10.6	12.2	14.1	16.2	18.6
Injectables	40	54	70	91	119	148	185	222
VFTs	120	130	140	151	163	176	190	206
Condoms	12000	16800	22680	29484	36855	44226	53071	63685

TABLE 4

High Variant -- Region "X"

Estimated Contraceptive Consumption for Region "X"
 based on Best Estimates of 1993 Usage, and Estimates
 of Annual Percentage Increases in Use for Each Method
 (Figures are in Thousands)

METHOD	1993	1994	1995	1996	1997	1998	1999	2000
Oral pills	450	518	595	684	787	905	1041	1197
IUDs	1	1.15	1.32	1.52	1.75	2.01	2.31	2.66
Injectables	6	8.10	10.53	13.69	17.80	22.24	27.81	33.37
VFTs	15	16.2	17.5	18.9	20.4	22.0	23.8	25.7
Condoms	1350	1890	2552	3317	4146	4976	5971	7165

TABLE 5

Medium Variant --Estimated Cost Per Year for Contraceptives
Required for All Ethiopia (in \$1000)

METHOD	1994	1995	1996	1997	1998	1999	2000	\$ TOTAL	PERCENT
Oral pills ¹	572	691	798	921	1064	1173	1293	6512	35.4
IUDs ²	8	10	11	13	15	17	20	94	0.5
Injectables ³	40	53	69	87	110	133	153	645	3.5
VFTs ⁴	13	14	15	17	19	21	23	122	0.7
Condoms ⁵	705	919	1170	1458	1847	2236	2699	11034	59.9
TOTAL	1338	1687	2063	2496	3055	3580	4188	18407	

(Grand Total = \$18.407M)

¹ For orals, 1994 USAID public sector price is applied

² For IUDs, 1994 USAID price is used

³ 1993 UNFPA price used for injectables, since USAID price not established yet

⁴ For VFTs, have used "Conceptrol®", USAID 1994 price, rather than Neo-Sampoon®

⁵ For Condoms, 1994 USAID price is used

TABLE 6

Medium Variant

**Estimated Cost Per Year for Contraceptives Required
for Region "X" (in \$1000) -- Medium Variant**

METHOD	1994	1995	1996	1997	1998	1999	2000	TOTAL \$	PERCENT
Oral pills	86	104	120	138	160	176	194	978	41.7
IUDs	1	1	2	2	2	2	3	13	0.6
Injectables	6	8	10	13	16	20	23	96	4.1
VFTs	2	2	2	2	2	3	3	16	0.7
Condoms	79	103	132	164	208	252	304	1242	53.0
TOTAL	174	218	266	319	388	453	527	2345	

NB: See Table 5 for price bases

TABLE 7

"Price List" Estimates for future years, based on
1994 costs, inflated 5% annually*

METHODS	SOURCE	1994	1995	1996	1997	1998	1999	2000
Oral Pills	Public Sector	\$0.1733	0.1820	0.1911	0.2006	0.2106	0.2212	0.2322
	Soc. Marketing	\$0.2695	0.2830	0.2971	0.3120	0.3276	0.3440	0.3612
IUDs (CuT 380A)	USAID	\$1.087	1.141	1.198	1.258	1.321	1.387	1.457
	UNFPA	\$0.64	0.672	0.706	0.741	0.778	0.817	0.858
Injectables	UNFPA	\$0.800	0.840	0.882	0.926	0.972	1.021	1.072
VFTs		\$0.101	0.106	0.101	0.117	0.123	0.129	0.135
Condoms		\$0.047	0.049	0.052	0.054	0.057	0.060	0.063

* Estimated unit costs derived mainly from 1994 USAID "CPT Guidance", except for injectables unit costs and the set of values for IUDs, which are UNFPA prices.

TABLE R-1

"Medium" Program Growth Projection Rates

**Annual Percentage Growth in Method Specific
Contraceptive Usage, 1994-2000, used in
calculating projected Consumption Rates and
Commodity Requirements
(Rates are applied to estimated 1993 base-year usage)**

METHOD	1994	1995	1996	1997	1998	1999	2000
Orals	10	15	10	10	10	5	5
IUDs	10	10	10	10	10	10	10
Injectables	25	25	25	20	20	15	10
VFTs	5	5	5	5	5	5	5
Condoms	25	25	20	20	20	15	15

TABLE R-2

"High" Program Growth Projection Rates

Annual Percentage Growth in Method Specific
Contraceptive Usage, 1994-2000, used in
calculating projected "Consumption" Rates and
Commodity Requirements
(Rates are applied to estimated 1993 base-year usage)

METHOD	1994	1995	1996	1997	1998	1999	2000
Oral pills	15	15	15	15	15	15	15
IUDs	15	15	15	15	15	15	15
Injectables	35	30	30	30	25	25	20
VFTs	8	8	8	8	8	8	8
Condoms	40	35	30	25	20	20	20

TABLE CP-1

Medium Variant -- Contraceptive Prevalence Estimates

Estimated CYP, in 1000s, for 1994 and 2000, for Region "X" and for All Ethiopia, and Method-specific "CYP Prevalence" for Modern Supply-Based Methods

METHOD	REGION "X"				ALL ETHIOPIA			
	1994		2000		1994		2000	
	CYP	%PREV.	CYP	%PREV.	CYP	%PREV.	CYP	%PREV.
Oral pills	33.0	1.25	55.7	1.71	220.0	1.85	371.3	2.54
IUDs	3.9	0.15	6.8	0.21	27.0	0.23	48.0	0.33
Injectables	1.9	0.07	5.3	0.16	12.5	0.11	35.8	0.25
VFTs	0.1	0.00	0.1	0.00	0.8	0.01	1.1	0.01
Condoms	5.6	0.21	16.1	0.50	50.0	0.42	142.8	0.98
TOTAL	44.5	1.69	84.0	2.58	310.3	2.62	599.0	4.11

NOTE: Estimated denominator of Eligible Women in "Region X" increases from 2.64 million in 1994 to 3.25 m. in 2000. For "All Ethiopia", Eligible Women increases from 11.88 to 14.61 million.

*CYP values are based on USAID-recommended standard "default" values, except for condoms, for which the substantially higher factor of 300 condoms per CYP is used, in recognition of the high use of this method for STD/HIV prevention.

TABLE CP-2

"High" Variant, -- Contraceptive Prevalence Estimates

Estimated CYP, in 1000s, for 1994 and 2000, for Region "X"
and for All Ethiopia, and Method-specific "CYP Prevalence"*
for Modern Supply-Based Methods

METHOD	REGION "X"				ALL ETHIOPIA			
	1994		2000		1994		2000	
	CYP	%PREV.	CYP	%PREV.	CYP	%PREV.	CYP	%PREV.
Oral pills	34.5	1.31	79.8	2.46	230	1.94	532	3.64
IUDs	4.0	0.15	9.3	0.29	28.2	0.24	65.1	0.45
Injectables	2.0	0.08	8.3	0.26	13.5	0.11	55.5	0.38
VFTs	0.1	0.00	0.2	0.01	0.9	0.01	1.4	0.01
Condoms	6.3	0.24	23.9	0.74	56	0.47	212	1.45
TOTAL	46.9	1.78	121.5	3.74	328.6	2.77	866	5.93

NOTE: Estimated denominator of Eligible Women in "Region X" increases from 2.64 million in 1994 to 3.25 m. in 2000. For "All Ethiopia", Eligible Women increases from 11.88 to 14.61 million.

* CYP values are based on USAID-recommended standard "default" values, except for condoms, for which the substantially higher factor of 300 condoms per CYP is used, in recognition of the high use of this method for STD/HIV prevention.

ATTACHMENT ONE

Terms of Reference

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D C 20523

cc Suzanne
Tim Johnson
Catalyn

PANAFAX

TO: Carmela Abate, Social Services Officer
ORGANIZATION: USAID/Addis Ababa
FAX # : 251 1 613801
TELEPHONE:
FROM: *CH* Carl Hawkins, Bonita *lmc* Blackburn
OFFICE: R&D/POP/CPSD
TELEPHONE: 703 875-4580
DATE: September 13, 1993

COMPLETED

NUMBER OF PAGES (INCLUDING COVER SHEET) 2

<input type="checkbox"/>	As Requested	<input type="checkbox"/>	For Your Information
<input checked="" type="checkbox"/>	For Clearance	<input type="checkbox"/>	For Comment
<input type="checkbox"/>	Per Conversation	<input type="checkbox"/>	Per Memorandum

Message:

A. Victor Barnes of the Office of Health, and John Crowley of the Office of Population have asked that CDC and JSI, under the FPLM Project, undertake an initial assessment of the logistics requirements for AIDS prevention and family planning activities that are planned or underway in Ethiopia. To initiate this work, we propose that Tim Johnson of the CDC and Suzanne Thomas of JSI travel to Ethiopia in early October for a two-week period.

The scope of work for this visit would be to:

- 1) Identify local counterparts to work with throughout this visit and who can also undertake follow-on activities.
- 2) Determine the types of activities which the Mission may support, such as AIDSCAP, which require technical assistance in logistics management (i.e., condom distribution, particularly through public sector channels; STD drug distribution; educational material distribution).
- 3) Identify the various distribution systems that are involved in these interventions.
- 4) Identify linkages between organized public and private sector family planning activities and agencies concerned with STD/HIV.
- 5) Outline and propose short and longer term plans for subsequent

logistics activities that strengthen or develop mechanisms for the forecasting of commodities requirements and enhancing their distribution.

The proposed dates for this visit are October 10 - 22. These dates were selected as they coincide with other travel to the region that the consultants are considering, and for which the dates are not flexible. Subject to Mission concurrence, Johnson and Thomas would be arriving from Nairobi on Sunday, October 10 by ET 960 and to depart Addis Ababa o/a Friday, October 22.

The consultants realize that October 11 is a U.S. Federal holiday, but could initiate contacts with relevant Ministry, donor and collaborating institutions should the Mission so desire. On Tuesday, October 12, the consultants would meet with Mission personnel to plan the remainder of their visit.

At this time, we seek Mission concurrence for this proposed travel, which should be sent directly to John Crowley, CPSD.

Should the Mission concur with this proposed plan, Thomas and Johnson request Mission assistance with hotel arrangements.

B. In response to Addis 05556 of 8/24 and your fax of 9/9/93, R&D/POP/CPSD has scheduled sea shipment of 12 million 52mm non-colored, no logo condoms (52NX) - two shipments 6 million each to arrive in 1/94 and 6/94. We have received your PIO/C in the amount of \$650,000 for these condoms. Although we have reserved the product and scheduled shipping dates, the Mission needs to submit an official ordering cable as PIO/Cs are not ordering documents.

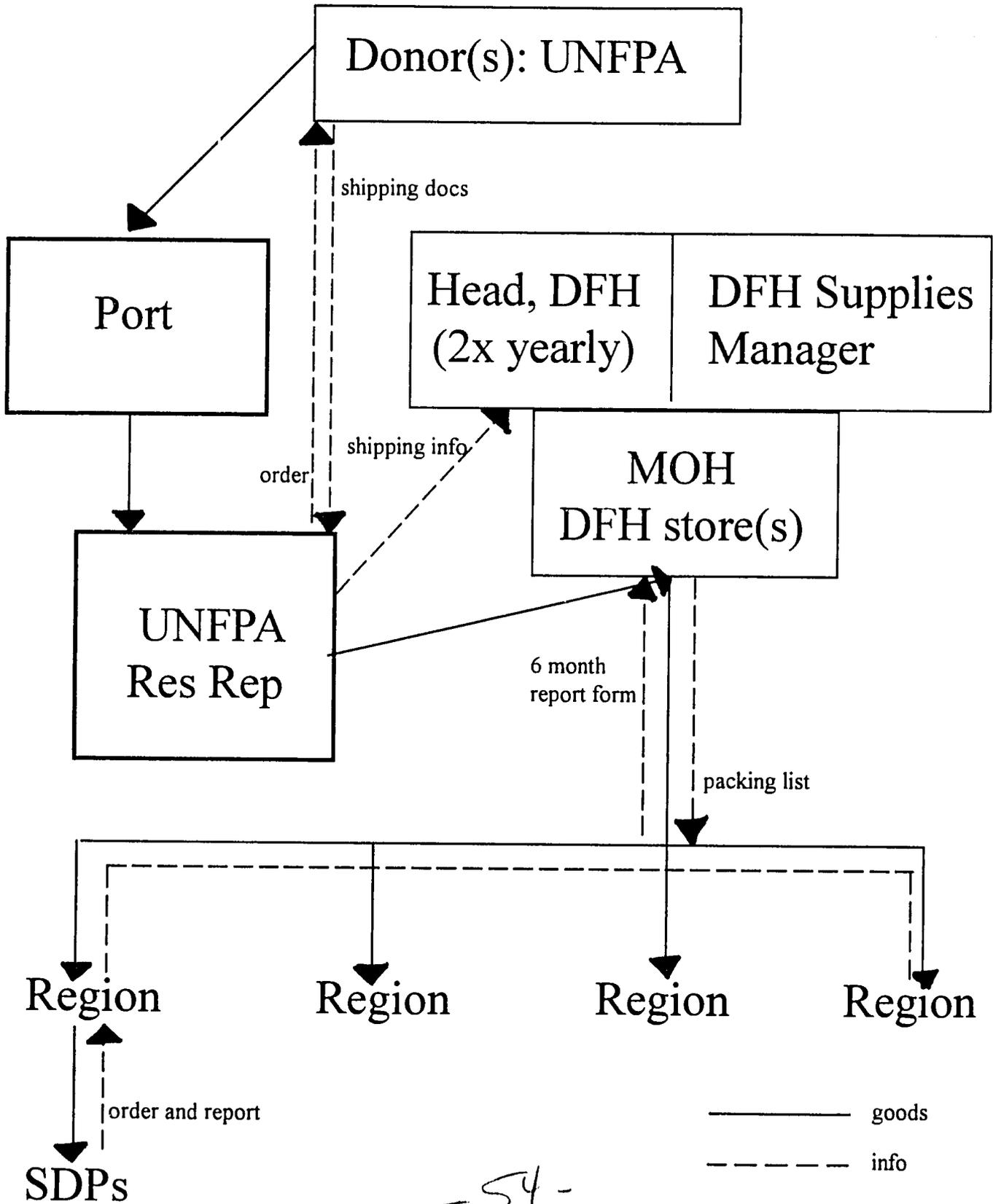
C. Per Addis 05556 para 1, the freight cost for the 7 million condoms that are being transferred from Pakistan will be covered by R&D/H/AIDS central condom emergency fund and not by AIDSCAP core funds.

D. Per Addis 05556 para 3, has Mission had any response from RFMC/Nairobi as to when AID/W can expect the PIO/C for repayment of loan in the amount of \$320,000?

ATTACHMENT TWO

Diagram of MOH/DFH Logistics System

MOH Contraceptive Logistics System



ATTACHMENT THREE

Logistic System Design Workshop Agenda (Sample)

DRAFT

March 17, 1994

Sample Workshop Agenda

Day One

Introduction and Opening Activities

What is a Logistics System

Review of Current Contraceptive Logistics Management System

- Identification of Components, Forms, Guidelines

- Description of Components

- Describing the Pipeline and the Transportation System

Day Two

What is a Logistics Management Information System (LMIS)?

Description of the Current LMIS

Strengths and Weaknesses of the LMIS

Suggestions for Improvement of the LMIS

Day Three

Development of Improved Formats

What is an Inventory Control System?

Description of the Current Inventory Control System(s)

Strengths and Weaknesses of the Inventory Control System

Selection of an Ethiopia Appropriate Inventory Control System

Day Four

Good Storekeeping Practices

Handling Expired and/or Damaged Goods

Physical Inventory

LMIS/Forms: Revisit, Review and Conclusions

Day Five

Supervision of the Contraceptive Logistics Management System

Monitoring and Evaluation - An Overview

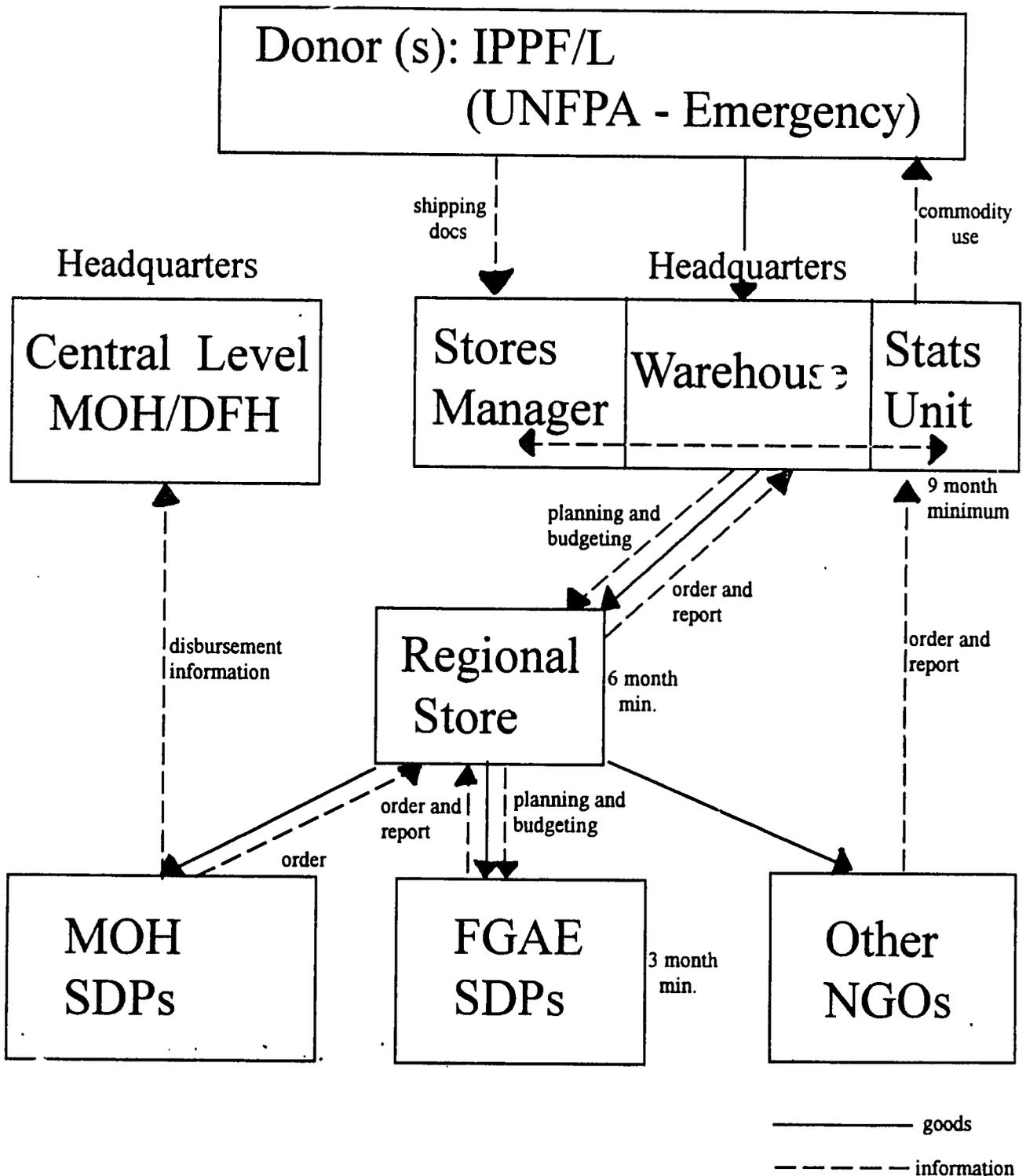
Implementing the Contraceptive Logistics Management System

Note: Timing and length of the workshop depends on the desires of the national program and the previous experience with logistics management of the participants.

ATTACHMENT FOUR

Diagram of FGAE Logistic System

FGAE



The disbursement information from MOH SDPs does not go back to FGAE Headquarters, leaving a gap for calculating order quantities within both the DFH and FGAE.

ATTACHMENT FIVE

FGAE Forms

FAMILY GUIDANCE ASSOCIATION OF ETHIOPIA

Clinic Report Form

Name of clinic _____ Report for the month of _____

Total attendance _____ Report date _____ By _____

I New Acceptors:

Pills _____

Condom _____

I U D _____

Foam tablet _____

Foam _____

Injectables: (2 month dose) _____

(3 month dose) _____

Cream Jelly _____

Diaphragm _____

II Accesor visits:

Pills _____

I U D _____

Condom _____

Foam tablet _____

Foam _____

Injectables: (2 month dose) _____

(3 month dose) _____

Cream Jelly _____

Diaphragm _____

III Consultation:

New _____

Repeat _____

IV Infertility

New _____

Repeat _____

V Referred to other Agency (specify)

i) _____

ii) _____

-61-

**FAMILY GUIDANCE ASSOCIATION OF ETHIOPIA
ACCEPTORS AND CONTRACEPTIVE INVENTORY FORM**

Name of Health Institution (In full) _____

Administrative Region _____ Awraja _____

Month of _____ 19 _____

Reported by _____

1. FAMILY PLANNING ACCEPTORS

Type of Acceptor	Pills	IUCD	Condom	Foam tablet	Others	Client seen and method counselled
New						
Revisit						
Total						

TYPES OF CLIENTS COUNSELLED

Infertility _____ Youth services _____

Marriage problems _____ Unwanted pregnancy _____

Method failure _____ Others _____

2. CONTRACEPTIVE INVENTORY FORM

Contraceptive	Balance from previous month	Received this month	Source of supply	Issued to Acceptors	Otherwise Disposed*	Total Issued	Balance at hand
Eugynon							
Microgynon							
Microlut							
Microval							
Microval							
Nordette							
Lo-Feminal							
Cu - T							
Foam tablet							
Condom							
Emko Foam							
Injectables:							
Depo Provera							
Norestrat							
Other (specify)							

N.B * Otherwise disposed mean supplies given for various medical treatment

Explain this _____

-62-

FAMILY GUIDANCE ASSOCIATION OF ETHIOPIA

REQUISITION FORM

NAME OF INSTITUTION _____ APPROVED BY _____
 REQUESTED BY _____ (PERSON IN CHARGE OF INSTITUTION)
 AUTHORIZED BY (FGAE) _____
 DATE _____

ITEMS AVAILABLE FROM FAMILY GUIDANCE ASSOCIATION

(REQUEST SHOULD BE FORWARDED AT LEAST WHEN YOU HAVE ONE MONTH SUPPLY IN HAND)

NO.	ITEMS AVAILABLE	UNIT	QUANT.	STOCK IN HAND	REMARKS
1	MICROLUT	CYCLE			
2	MICROVAL	"			
3	NORDETTE 28 FE				
4	OVRAL 28 FE				
5	EUGYNON 28 FE				
6	MICROGYNON 28 FE				
7	COPPER T 380 A				
8	DEPO PROVERA 150 MG	VAIL			
9	NORESTRAT 200 MG	"			
10	DELFOH FOAM WITH INSEB. BTL.				
11	CONDOM	PCS			
12	NEO SAMPOON FOAM TAB.	TUBES			
13	GLOVES-SURGICAL	PK/100			
14	GLOVES DISPOSABLE				
15	KIT	COMPLET			
16	DIAPHRAGM	PCS			
17	RAMSES JELLY W/APPLIC. TBS				
18	CASE RECORD CARD	PCS			
19	I.D. CARD				
20	OTHERS				

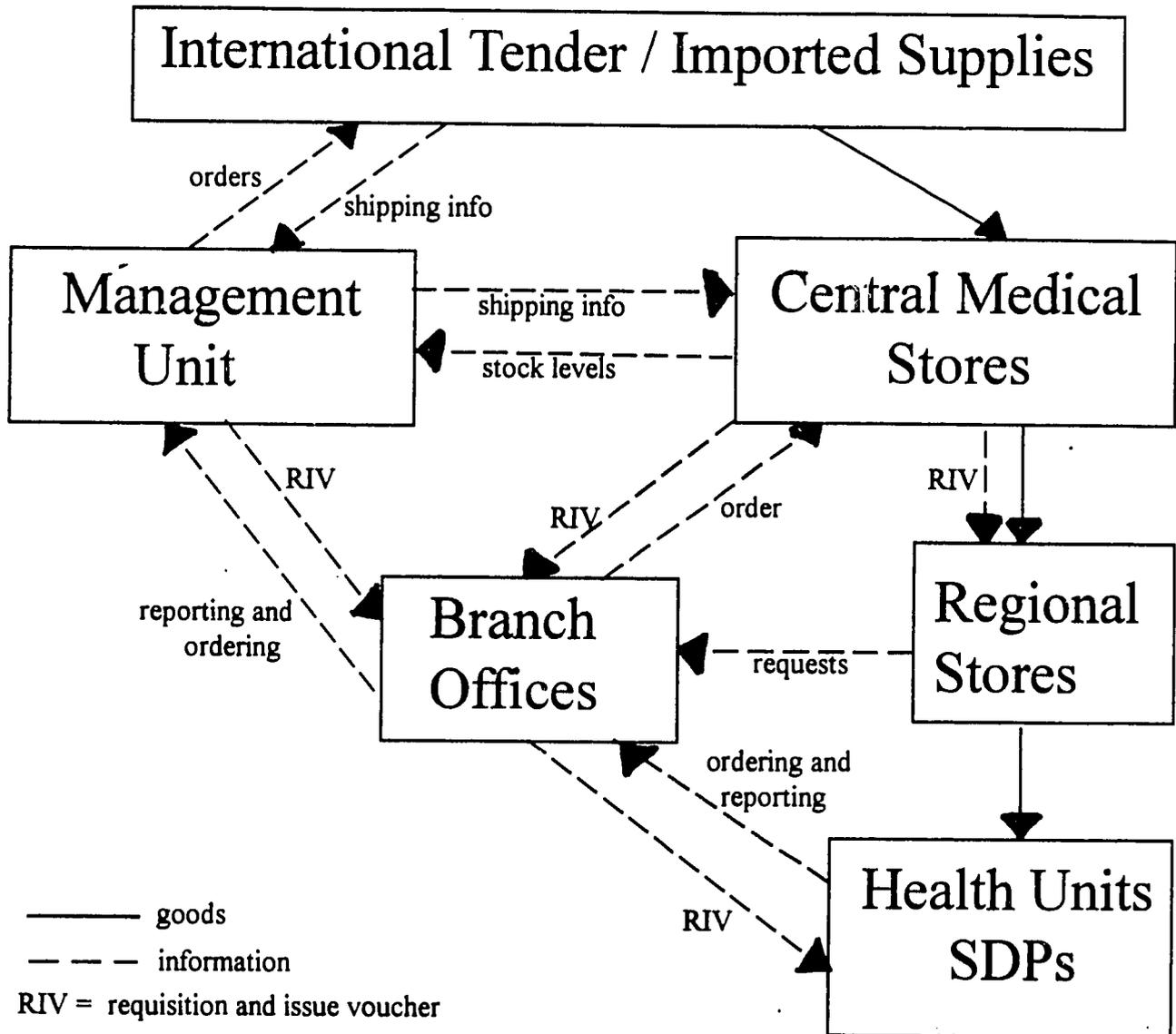
TN/AD JULY 1995

- 64 -

ATTACHMENT SIX

Diagram of Epharmicor Logistic System

EPHARMICOR



Relationship between branch offices and regional stores is unstandardized.

No inventory control system.

Go out for tender/order when stocked out- often stocked out for months/year (s).

Inconsistencies between stock/bin cards and physical inventory.

ATTACHMENT SEVEN

Form for STD Drug Reporting (AIDSCAP)

DEPARTMENT OF AIDS CONTROL STD DIVISION PATIENT REGISTRATION FORM

HEALTH UNIT _____		WOREDA _____			ZONE _____				REGION _____										
Date	Serial No.	Name	Age	Sex	Reasons for visit											Visit Seq.	Tx.	Refer	Remarks
<input type="text"/> dd mm yy				1 2	1 2 3 4 5 6 7 8 9 10 11	1 2	1 2	1 2											
<input type="text"/> dd mm yy				1 2	1 2 3 4 5 6 7 8 9 10 11	1 2	1 2	1 2											
<input type="text"/> dd mm yy				1 2	1 2 3 4 5 6 7 8 9 10 11	1 2	1 2	1 2											
<input type="text"/> dd mm yy				1 2	1 2 3 4 5 6 7 8 9 10 11	1 2	1 2	1 2											
<input type="text"/> dd mm yy				1 2	1 2 3 4 5 6 7 8 9 10 11	1 2	1 2	1 2											
<input type="text"/> dd mm yy				1 2	1 2 3 4 5 6 7 8 9 10 11	1 2	1 2	1 2											
TOTAL CASES:				<input type="text"/>	<input type="text"/>														

CODING

Date: <input type="text"/> <input type="text"/> <input type="text"/> dd mm yy 1 Jan., 1993	Sex: 1 = Male 2 = Female	Reason for visit: 1=Urethral discharge 4=Genital ulcer 7=Balinitis 10=Genital warts 2=Vaginal discharge 5=Inguinal bubo 8=Balanopositis 11=Other STD 3=PID 6=Ophthalmia neonatorum 9=Epididymorchitis	Visit Sequence: 1=Initial 2=Follow-up	Treatment: 1=Benzathine penicillin 2=Erythromycin 3=Cotrimoxazole 4=Tetracycline 5=Other	Referral: 1=Yes 2=No
--	---------------------------------------	---	--	--	-----------------------------------