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**CHAD FAMILY PLANNING PROGRAM:  
CONTRACEPTIVE SUPPLY LOGISTICS MANAGEMENT  
INFORMATION SYSTEMS**

**Current Status and Recommendations**

**Trip Report  
May 24 - June 9, 1990**

**Elise Levin, FPLM  
Jack Packard, SEATS**

**Family Planning  
Logistics Management Project**

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John Snow, Inc.  
1100 Wilson Boulevard, 9th Floor  
Arlington, VA  
22209 USA  
Telex: 272896 JSIW UR  
Telephone: (703)528-7474

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## I. SUMMARY

An assessment of the current status of the contraceptive logistics system was done in Chad from May 24 to June 9, 1990 by the Family Planning Logistics Management (FPLM) Project. Consultants met with personnel in the public sector family planning programs, in private sector pharmacies, and with representatives of donor agencies. The only family planning program in the country is a UNFPA funded project which has seen increased demand despite minimal promotion of the program. USAID plans to fund family planning services in Sarh prefecture as part of an integrated Child Survival Project. This project does not include funds specifically for the procurement of contraceptives.

In the N'Djamena project, which receives commodity and training support from USAID, clinics are constrained by uneven product availability, and both the distribution and the logistics information systems require development. Substantial overstocks of oral contraceptives and IUDs were found in the central warehouse, and the system was nearly stocked out of spermicidal tablets and injectables. This report includes a description of the current status of family planning and related logistics issues, recommendations for resolving the current supply situation and improving storage and transportation constraints, contraceptive procurement tables, guidelines for a distribution system for the N'Djamena and Sarh projects, and suggested forms to be used in the development of a logistics management information system.

## II. INTRODUCTION

Consultants Jack Packard and Elise Levin of John Snow, Inc. visited Chad from May 24 through June 9, 1990 to provide technical assistance in family planning logistics management to the Ministry of Public Health and the Chad mission of the U.S. Agency for International Development. Assistance was requested by the U.S. mission in conjunction with its Chad Child Survival Project. The scope of work was:

- to estimate contraceptive needs for N'Djamena and for the new project in Sarh
- to assess the current management information system for contraceptive logistics management in N'Djamena and make recommendations for improvement
- to assess the current distribution system in place in N'Djamena and make recommendations for improvement
- to assess storage conditions and procedures at the Ministry of Public Health central warehouse with regard to contraceptive products and in the N'Djamena project, and in the new project area, and make recommendations for improvements
- to ensure that procedures are in place for the timely receipt of

shipments including registration if necessary, and to obtain the correct addresses for shipments and documents.

The original scope of work included a field trip to the future project area in Sarh; however, the trip was cancelled due to scheduling problems.

During the two week consultancy, we met with officials of the Ministry of Public Health, PASP, USAID, UNFPA, WHO, EEC, PHARMAT, INTRAH, with health workers in MOPH clinics and staff of private sector pharmacies. A list of individuals with whom we met is in Appendix 1. Although the Chad National AIDS Commission staff were not in the country at the time of our visit, relevant issues were discussed with the WHO Representative.

We extend our sincere thanks to all those who took the time to meet with us to discuss present or anticipated family planning programs, in particular Mr. Mamadou Bisso, General Director of the Ministry of Public Health, Dr. Nana, Director of the Assiam Vamtou Family Well-being Center, Dr. Djikaloum, Director of the SMI/BEF Unit in the MOPH, and Ms. Virginia Paine, Population Advisor, and Mr. Samir Zoghby, Human Resources Development Officer, USAID/N'Djamena.

### III. OVERVIEW OF FAMILY PLANNING PROGRAMS

The population of Chad is estimated to be 5.6 million (U.N. Population Projections, 1988). The growth rate estimate is 2.2 percent per year (Population Reference Bureau), which is comparatively slow for the region. This rate reflects the very high infant mortality (estimated at 143 per 1000 live births, PRB) and low life expectancy which are Chad's predominant demographic characteristics. Maternal mortality estimates are also very high. Given these conditions, efforts in the delivery of family planning services to date have been made in the context of improvement of women's and children's health. All "family well-being" activities have been implemented as part of the delivery of health services, whether in the private or public sectors.

Family planning activities in Chad's public sector began three years ago with a national family planning center in the capital, N'Djamena, which is funded by UNFPA and implemented by the local WHO office. The project is concentrated in the eight maternal and child health/family planning centers (SMIs) in N'Djamena. No other substantial family planning exists in the public sector in Chad. AID has contributed significant contraceptive commodity inputs to this effort, and with the assistance of INTRAH and JHPIEGO, has provided family planning training to up to 230 participants. Despite these inputs, the current UNFPA program is characterized by weak supervision, chronic stockouts of contraceptives at the clinics, a deviation from its stated objectives (according to a 1989 evaluation report), almost a complete lack of IEC activities, and practically no management information system.

Based on scant service delivery statistics and dispensed to users data, we estimate that presently, there are approximately 3000 users of modern contraceptive methods in N'Djamena, representing less than three percent of the women of ages 15 to 49 living in the capital. The eight UNFPA-sponsored

SMIs (maternal and child health centers) are estimated to account for approximately 1200 clients in 1990, while the private sector's eight pharmacies and 21 MOH "depot pharmaceutiques" provide contraceptive supplies to 1800 to 2400 customers this year. Information concerning family planning is almost entirely disseminated by word of mouth. There is very little IEC effort in family planning, e.g. radio messages, posters, campaigns. Nonetheless, most of the SMIs have doubled their clientele during the past year, indicating that there is a significant unmet demand for contraception among the population. With improved IEC, it is believed that consumption of contraceptives will continue to increase in the public sector.

### Private Sector

Private pharmacies and to a lesser degree private clinics play a significant role in meeting the demands of family planning clients - serving an estimated 1800 to 2400 users in N'Djamena alone. Demand appears to be fairly stable, based on 1989 and 1990 sales data from PHARMAT. Due to the lack of publicity, much of the population is probably unaware of the free contraceptive distribution at the SMIs, and private pharmacies seem to be better recognized as sources of contraceptives. Based on anecdotal evidence, it appears that clinicians in the public sector sometimes prescribe pills available at private pharmacies rather than send clients to the "free" family well-being clinics. Prescriptions are officially required; however this requirement is sometimes overlooked. PHARMAT is a parastatal pharmaceutical firm which imports drugs and sells them to about sixty privately owned pharmacies in N'Djamena and the fourteen prefectures. A wide range of contraceptives are offered; 6 brands of pills (none are progestin-only "mini-pills"), IUDs, condoms, and injectables. Prices for pills range from \$1.57 to \$2.67 per cycle; condoms are \$6.26 for 12, IUDs are \$5.10 each, and injectables are \$7.85 per vial.

The private sector has received little assistance in management from the major family planning donors. Pharmacy staff expressed a desire to be included in relevant trainings and seminars. It is suggested that PHARMAT and individual pharmacists be included in future seminars or workshops that may be arranged on the following topics: 1) informing the public about family planning; 2) contraceptive technology updates, 3) contraceptive logistics.

### Donors

Donor assistance has been divided geographically among the fourteen prefectures. Major actors in the health field are EEC, UNFPA, USAID, religious groups, and to a lesser extent (in terms of geographic breadth) in recent years, Medecins sans Frontieres.

The main family planning donors perceive two obstacles to the expansion of service delivery outside N'Djamena: first, a French-implemented law dating from the 1920's prohibiting the advertising, importation, and distribution of contraceptive products (this law is routinely ignored as contraceptives are imported and provided in both the private and public sectors); second, the essential drug list for Chad, which currently does not include contraceptives. Some donors, including the largest one, an EEC-funded "Sixth E.D.F. Project"

(see EEC/AEDES section below), are reluctant to actively promote or distribute contraceptives until they are included on the official essential drug list, an event which is not expected to occur in the short term.

Following is a brief description of the current status of each of the major donors' programs relative to family planning.

#### EEC/AEDES

The EEC-funded "Sixth EDF Project" has been in place for one and a half years, and is expected to continue for another nine years. This project covers the nine Sahelian prefectures of Chad and is primarily concerned with re-establishing dispensaries and the provision of essential drugs and clinical training. The Sixth FED Project does not plan to include family planning activities until the Government's essential drug list is modified to include contraceptives. The project has made some progress in developing an MIS for drug distribution, based on a semi-annual resupply system directly to the clinics. Sixth EDF is also providing substantial long-term technical assistance in management, MIS and a six-month consultancy in warehousing to advise PASP (the MOH department charged with procurement, central storage, and transport of drugs to the prefecture level).

Future AID efforts in MIS development and recordkeeping at PASP would benefit from inviting the participation of the AEDES logistics advisor.

#### UNFPA

UNFPA has prepared a 1.3 million dollar, three year follow-on project to expand upon their recently completed N'Djamena activity. "Phase Two" will continue to support the eight N'Djamena MCH/Family Well-Being centers and will also move into two new prefectures, Lagone Occidental and Ouaddai, and work with SMIs in both. The project paper for Phase Two has not yet been signed; however, it is expected to contribute technical assistance consultancies, including an advisor to the SMI/BEF unit chief. Similar long-term assistance is planned by USAID in its Child Survival Project. The potential overlap in advisory functions by consultants from the two donors could result in establishing unnecessary parallel systems and lead to a confusing situation in the newly created division within the MOPH. This overlap should be avoided through collaboration by UNFPA and USAID/N'Djamena.

#### USAID

AID has recently signed a five year "Chad Child Survival Project" agreement budgeted for 8.5 million dollars. The project has two programmatic approaches: 1) Institution building within the MOH to support the newly created MCH/Family Well-Being Division (SMI/BEF); 2) a family planning service delivery component as part of an integrated MCH effort in over 20 dispensaries, SMIs, and hospitals in Sarh Prefecture and later in Salamat Prefecture. The three

technical components of the project are Diarrheal Disease Management, Prenatal Care, and Family Planning. This project will enlist four long-term consultants: three based in N'Djamena and one in Sarh (one curriculum/training advisor; one population/family planning advisor; one health information systems advisor to the MOH statistics department; one MCH expert assigned to Sarh). Neither the project paper nor the budget includes any provision for the purchase of contraceptives or other materials specific to family planning.

#### IV. LOGISTICS MANAGEMENT: OBSERVATIONS AND RECOMMENDATIONS

Several evaluations and logistics assessments of the Chad family planning program have been carried out in the past two years, including, "Etat du Systeme Logistique de la Planification Familiale," by UNFPA consultant L. Delliquadri, 1989, and, "Revue Technique du Projet CHD/85/P01 Developpement d'un Service National de la Sante de la Famille au Tchad," by UNFPA consultant D. Pierotti, 1988. Therefore, the following pages point to specific issues regarding the current supply situation, storage, transport, information and distribution systems, quality assurance, training, and distribution of condoms for AIDS prevention, rather than provide another detailed descriptive report.

##### A. Short Term (three months)

Among the constraints and problems we observed, many should be resolvable through interventions in the short term. In all cases it is recommended that the USAID Human Resource Development Office coordinate with the other responsible organizations.

##### 1. Commodity Situation

At the central warehouse, there is a significant overstock of oral pills (ten to fifteen year supply) and IUDs (eight to ten year supply), and a three to five year stock of condoms. The initial order of 9600 pieces of Conceptrol was distributed one year ago. There is also a stock-out of injectables centrally, and the SMIs have from zero to a two-month stock of this product. Despite the abundant supply of condoms and IUDs, two of the five SMIs visited were stocked out of condoms and one was stocked out of IUDs. The situation at the SMIs indicates a problem in the distribution system, which is discussed below. The overstocks of pills and IUDs are based on projected use for N'Djamena and Sarh (as indicated in the CPTs) and expiration dates 1/91 for Ovrette and Copper T380As, and 4/93 for Lofemenal. Estimated overstocks are as follows:

| <u>Brand</u> | <u>Estimated Use 1990</u> | <u>Current Stock Central Stores</u> | <u>Estimated supply 1/1/92 in Central Stores</u> |
|--------------|---------------------------|-------------------------------------|--|
| Lofemenal    | 1700 cycles               | 247,000                             | 237,000  |
| Ovrette      | 1200 cycles               | 210,000                             | 202,000  |
| Copper T380  | 500                       | 6600                                | 4600   |

According to the director of the Assiam Vamtou Project, an order for medications and injectable contraceptives was placed in November, 1989. The order was processed through the local WHO office and sent to the WHO Regional Office in Brazzaville. The UNFPA project coordinator was unaware of the order at the time of our visit, and stated she was waiting for the order to be placed. Additionally, the order sent to Brazzaville had recently been sent back to N'Djamena for specification of brand and manufacturer names. Apparently, there is some confusion regarding the procedures for placing an order among the UNFPA project staff, the UNFPA coordinator, and WHO. It is also unclear whether the order for injectables should have been processed through WHO, or through UNFPA. In any case the UNFPA representative should be made aware of the order. Unfortunately it may be many months before Noristerat, one of the most popular methods, may be available to users.

The only other product that is needed immediately is spermicidal foaming tablets. Although the USAID Child Survival Project does not include a budget for contraceptives, other mission funds may be available for this purpose.

Due to deficiencies in the reporting systems for contraceptive distribution, estimates of use are susceptible to a large degree of error. In addition, significant quantities of oral pills and condoms can not be accounted for on the basis of available data. Approximately 40,000 cycles of Ovrette and 3000 to 4000 cycles of Lofemenal are no longer in stock at PASP or Assiam Vamtou, yet do not appear to have been distributed in the N'Djamena (or Sarh) project clinics. Small quantities may have been shipped to other prefectures; unfortunately this can not be determined on the basis of inventory cards, which have been used for condoms only since the end of 1989, and have yet to be implemented for pills and IUDs.

Between 100,000 and 800,000 condoms are unaccounted for in the distribution system. Records indicate that 1,620,000 to 1,818,000 pieces have been shipped to the MOPH and to the WHO in Chad from AID (mostly through FPIA) in 1988 and 1989. Two of these shipments definitely arrived, totalling 1,110,000 pieces, based on documents available at USAID/N'Djamena. Of the other two shipments, totalling 708,000 pieces, one is believed to have been received. One shipment of 198,000 Panthers appears in shipping documents sent by FPIA to the USAID mission, but there is no evidence that it was actually received. The current stock at PASP is 898,000 pieces, and includes both the MOPH and the WHO stock. Estimated use in the N'Djamena project for 1990 is 6000 maximum (no dispensed to users data exist). Additional shipments have been made to other prefectures, however the only sizeable shipment recorded on the inventory card was for 50,000 condoms sent to the B.E.T. prefecture in March. Inventory records do not exist prior to November 1989. The lack of information about quantities received and inventories at PASP requires immediate attention. Estimation of future needs is rendered quite difficult due to this situation.

The following actions are recommended for immediate attention:

1. 28,800 spermicidal foaming tablets should be ordered for immediate distribution. Either Conceptrol should be ordered from AID, or NeoSampoon from UNFPA. (1000

tubes of NeoSampoon is equivalent to 20,000  
Conceptral tablets.)

2. The order for injectables, a key method in the N'Djamena project, should be followed up immediately by the appropriate staff of USAID, WHO, and UNFPA.
3. Excess stocks of condoms, pills, and IUDs should be made available to other countries that request them through AID.
4. Commodity orders should be coordinated between AID and UNFPA; AID should provide orals for N'Djamena (as stated in the ordering document submitted to WHO), and should ask UNFPA to provide injectables for the Sarh project. The estimated requirement for the first year in Sarh is 30,000 vials of 3-month doses of Noristerat.

## 2. Storage

The PASP and Assiam Vamtou storage facilities have been described in detail in the 1989 Delliquadri report. The Assiam Vamtou facility, which distributes contraceptives to the 6 satellite ("antennae") SMIs in N'Djamena, appears to have undergone improvements since that assessment was done; it now contains shelves and has adequate space for the Project's needs. We also recommend the immediate implementation of stock cards for all contraceptive products and the placement of these cards in the storage room. Cards can easily be tacked onto the wooden shelves. (See Appendix 5 for an example of a bin card).

Organization of contraceptives at the PASP facility remains poor. Contraceptive supplies should be included in the overall management of the warehouse. Currently, there are no stock cards for contraceptive products other than condoms. Cartons are stacked more than 5 meters high, and water damage is visible on several cartons. The AEDES project has planned to hire a long-term consultant to assist in management of this facility.

It is recommended that PASP staff re-organize contraceptives in the warehouse, stacking them by date of manufacture. Cartons should be stacked no higher than 2.5 meters, and should be on pallets. Stock cards should be used for each product, and kept up-to-date. (See Appendix 2, Guidelines for Proper Storage).

It is recommended that USAID/N'Djamena provide pallets to the PASP warehouse in coordination with the AEDES effort.

### 3. Quality Assurance

894,000 condoms are currently stored in the PASP warehouse, with manufacture dates from 1/87 to 6/88. Although a sample of condoms was tested by WHO in 1989 - and was found to be acceptable - concerns have been raised again due to a newspaper article that criticized the quality of US-donated condoms. Clinic staff stated that clients did not complain about condoms breaking.

USAID/N'Djamena may wish to request that a sample of condoms from the warehouse be tested. A possible testing site in Cameroon will be investigated by one of the consultants this month. If the condoms are tested, individual samples must be drawn for each date of manufacture represented in the stock. Detailed instructions will be forwarded to USAID/N'Djamena at the time that sampling would be done.

### 4. Transport

In the N'Djamena project area, transport is a major constraint in the reliable availability of contraceptives at the "antenna" clinics. Two vehicles were provided by UNFPA and are apparently being used by the Government for other purposes.

It is essential to the management of the UNFPA N'Djamena project that at least one of vehicle be made available to the Assiam Vamtou center, to be used primarily for supervision of the antennae SMI's and for the regular transport of supplies from PASP to Assiam Vamtou and from Assiam Vamtou to the "antenna" clinics.

### 5. Management Information System and Distribution System

Currently, there is no regular ordering schedule, nor a standard, printed Ordering Form (Bon de commande). Data on quantities of each product dispensed to users are not routinely recorded or reported. This situation has caused an uneven flow of supply, resulting in unnecessary stockouts at the dispensary level.

Each dispensary should assign one person to be responsible for ordering and receiving contraceptive supply.

Appendix 3 contains a summary description of a recommended system for contraceptive distribution and logistics information management.

Appendix 4 contains examples of forms that have been used in other programs for the management of contraceptive supply, including a bin card, quarterly report and requisition form, and ordering form.

## 6. Training

Few systematic procedures for ordering and management of contraceptive supply were observed in the N'Djamena project centers. The implementation of a new system will require training of personnel involved in the management of supply. This training is not expected to begin before 1991; however planning should begin as soon as possible.

1. It is recommended that the final design of regular procedures for inventory control and logistics information management be developed in a workshop setting, including key N'Djamena project staff and Sarh project staff, and the new Health Information Systems advisor, if practical, as well as other donors. (November 1990 - January 1991)
2. This system development should be followed by training of personnel throughout the N'Djamena, and later Sarh, projects in the new procedures. For this purpose and for ongoing training in logistics management, a logistics module should be developed. (post-January 1991).

Technical assistance for the logistics training may be available from FPLM, CDC, or from SEATS upon request from USAID/N'Djamena. Assistance may also be available through UNFPA. The training should be coordinated with INTRAH's clinical training schedule.

## 7. National AIDS Commission

The National AIDS Commission has been in operation since 1988. Although condom distribution is an important feature of its medium term plan (published in November 1989), to date, a regular distribution mechanism or plan has not been established. (However there have been several one-time transfers of condoms to various recipients. Also, stock records at the PASP warehouse indicate that condoms have been shipped to prefectures where no known family planning programs exist; these shipments may have been made for the purpose of HIV prevention, possibly through the national Army). Unfortunately, we were not able to meet with the two key officials on the AIDS Commission because both were out of the country at the time of our trip, and we were not able to learn of plans the Commission may have. Whether or not such plans exist, we strongly recommend that a plan for condom distribution for the prevention of HIV transmission be established and implemented as soon as possible. In particular, condoms should be distributed freely through the following channels (most were identified in AIDS Commission reports):

- Chad National Army
- nightclubs
- hotels

- hospitals
- private physicians

B. Recommendations for the Medium Term (one year)

1. Essential Drug List

To facilitate the procurement process at the central level, it is recommended that the Ministry of Public Health include contraceptives in its List of Essential Drugs. The following list is suggested for review by AEDES, who are assisting in preparation of the List, and by the MOPH:

- Oral contraceptives: 3 doses

- a. Progestin-only such as Ovrette or Microlut
- b. very low-dose combined estrogen and progestin such as Lofemenal
- c. regular dose such as Ovidon

- condoms

- IUDs (copper-bearing device such as Copper T 380A)

- spermicide - foaming tablets with a spermicide such as Nonoxynol-9, e.g. NeoSampoo or Conceptrol

- injectable contraceptive such as Noristerat

- subdermal progestin-releasing implant, such as Norplant

Note: Not all of the above methods are available through AID.

2. Commodity Ordering - Contraceptive Procurement Tables

CPTs are in Appendix 5. A separate set of CPTs were prepared for the Sarh project, showing product transfers from the PASP facility. For Sarh, estimates of use for 1991 were made on the basis of 200 estimated contraceptive users in 1991, and the following method mix:

Estimated Method Mix for Sarh Family Planning Services: First Year

| <u>Method</u> | <u>Proportion of Method Mix (%)</u> | <u>Estimated Use (Units)</u>                 |
|---------------|-------------------------------------|--|
| Orals         | 53                                  | 2100 cycles (1575 Lofemenal,<br>575 Ovrette) |
| IUDs          | 20                                  | 50   |
| Injectable    | 10                                  | 100 vials                                    |
| Conceptrol    | 10                                  | 3000   |
| Condoms       | 8                                   | 2000   |
| Total         | 101                                 |  |

Calculation of the maximum level (twelve months) includes a six month safety stock, to reduce the possibility of shortages due to greater demand or a different method mix from the estimates shown above.

For central procurement, the only urgent needs are for spermicidal tablets and injectables, both of which are stocked out. Considerable overstocks of other products remain, as discussed above.

3. Transport

For the USAID project area in Sarh, a vehicle should be made available in the Prefecture, principally for supervision and for the regular transport of drugs, contraceptives, and materials to the various clinics. Fuel should also be provided by the project.

Transport of drugs, contraceptives and materials from N'Djamena to Sarh should be provided by the MOPH. (We estimate that deliveries will be made every six months). An agreement should be reached between the MOPH and USAID regarding fuel expenses.

4. Training

Training modules in logistics management should be developed and conducted routinely as a part of the family planning training for clinicians. This activity may be carried out in collaboration with INTRAH; we met with INTRAH consultants to discuss this possible collaboration.

5. Drug and Trademark Registration

PASP staff stated that the MOPH had initiated a registration process by requesting documentation on all products currently stored in the warehouse. These documents had been submitted to the MOPH.

Conceptrol and NeoSampoo spermicides should be registered with the MOPH to facilitate future importation of these products, in addition to other contraceptives already in the PASP warehouse.

## LIST OF APPENDICES

### APPENDIX

- 1 List of Persons Contacted
- 2 Guidelines for Proper Storage
- 3 Recommended Distribution System
- 4 Examples of Basic Forms for Logistics Management
- 5 Contraceptive Procurement Tables

**APPENDIX 1**

**List of Persons Contacted**

PERSONS CONTACTED

Ministry of Public Health

Mr. Mamadou Bisso, General Director  
Mr. Ouarmaye Ouadjon, Chef du Burequ de Statistiques, Planification et Etudes

Assiam Vamtou Family Well-Being Center

Dr. Demane Nana, Chief Physician

Pharmacie d'Approvisionnement au Secteur Publique (PASP)

Mr. Laurent, Director, National Pharmacy and Laboratories

PHARMAT

Mrs. Mariam Yankalbe, Technical and Commercial Manager

Pharmacie du Canal

Mrs. Nicole Froud

UNDP

Mrs. Mariam Pangah, Coordinator, UNFPA

INTRAH

Mr. Djariatou Thiam  
Mrs. Onanga Bongwele

USAID

Mr. Bernard Wilder, A.I.D. Representative  
Mr. Samir Zoghby, Human Resource Development Officer  
Ms. Virginia Paine, Population and Family Planning Advisor

WHO

Dr. Diego Buriot

AEDES Project (Sixieme FED)

Dr. Henri Got  
Mr. Daniel Vandenberg

**APPENDIX 2**  
**Guidelines for Proper Storage**

## GUIDELINES FOR PROPER STORAGE

1. Clean and maintain storeroom regularly.
2. Maintain roof to avoid water leakage.
3. Secure storeroom from water penetration.
4. Ventilate storeroom well.
5. Light storeroom well.
6. Disinfect and spray storeroom for insects regularly.
7. Store supplies away from direct sunlight.
8. Store open cartons of condoms and rubber gloves away from electric motors and fluorescent lights.
9. Stack supplies at least 4 inches (10 cm) off the floor, preferably on pallets made of wood or steel.
10. Stack supplies at least 1 foot (.3 m) away from any wall and from other stacks of supplies.
11. Separate supplies by lots and in a manner accessible for "First-expiry, First-out" (FEFO), counting, and general management.
12. Stack supplies no more than 8 feet (2.5 m) high.
13. Arrange cartons so identification marks and other labels are visible.
14. Issue supplies by carton or box lot.
15. Assure fire safety equipment is available and accessible.
16. Make storeroom secure, yet accessible to all authorized personnel at all times.
17. Separate and dispose of damaged and condemned supplies without delay.
18. Store insecticides and chemicals away from other supplies.
19. Store old files, information materials, office supplies, and related materials separately.

**APPENDIX 3**  
**Recommended Distribution System**

### APPENDIX 3

#### RECOMMENDED MAXIMUM-MINIMUM INVENTORY CONTROL SYSTEM N'DJAMENA FAMILY PLANNING PROJECT CLINICS

The following system is a "Maximum-Minimum" Inventory Control System that is designed for programs with relatively low quantities of contraceptives being distributed. Two conditions are essential to the proper functioning of this system:

1. Constant attention to maintenance of the logistics system, including the timely completion of forms and orders, and regular supervision; and
2. Thorough training of all personnel responsible for managing contraceptive supply.

#### Basic Procedures

1) Simple stock cards should be used at each clinic site, one for each contraceptive product, e.g. one card for Noristerat, one for Lofemenal, one for Ovidon, etc. The first entry should be the current stocks, under "Balance". All entries should be in terms of units, e.g. cycles of pills, units of condoms (not boxes), ampules of injectables.

Every receipt of the product should be entered with the date of receipt. Quantities should be recorded as "Issued" when they are transferred from the clinic storeroom to the clinicians' station. In small clinics that do not have a separate storeroom, issues should be recorded once epr month, based on totals from the Daily Activity Register.

In the case of condoms, for which the Daily Activity Register may not be used regularly, the quantity issued should be estimated on the basis of the following equation:

$$\text{BEGINNING OF MONTH STOCK BALANCE plus QUANTITY RECEIVED DURING THE MONTH minus END OF MONTH STOCK BALANCE = ESTIMATED QUANTITY DISPENSED}$$

This number is recorded in the "Issues" column of the stock card. This procedure should be used for condoms only.

2) At the end of every month (or quarter; the frequency of reporting should be decided within the project) a Report and Order for Contraceptives (see the sample "Compte Rendu et Demande de Contraceptifs" in Appendix 4 should be completed at each clinic. (The Assiam Vamtou clinic should complete one report for its clinic supply and the project staff should complete a separate report for the storeroom that supplies all the clinics).

Quantities recorded in the following columns of the Quarterly Report are an aggregate of quarterly data from the stock cards:

- "Beginning Balance"
- "Received this Period"
- "Losses"
- "Ending Balance".

The quantity recorded in the "Dispensed/Issued" column is the total from the Daily Activity Register for the quarter.

The Quarterly Report and Request Form is aggregated at the central levels and provides useful data for the management of supply and for the determination of future contraceptive needs.

3) In a quarterly re-order system, clinics should maintain a minimum five month supply (two months minimum if reordering is monthly) so that they do not risk stockouts. One month's supply can be estimated as the average of the quantity dispensed during the last three months. This number has to be revised at every order, because consumption is changing rapidly. At the order time, the clinic should order a quantity that would bring the stock level to at least a eight month supply (for a quarterly re-order system). A simple formula to calculate an order quantity in a quarterly re-order system is:

$((\text{Average monthly quantity dispensed}) \times 5) - \text{stock on hand} =$   
Quantity to order

In this "maximum-minimum" inventory control system, one orders only if the stocks are at or below the minimum level at ordering time. For example, in a quarterly re-order system, if a clinic has a six month stock of condoms when it is time to order, then no condoms should be ordered. (At the next order, the stock should be at a two to three month level, and an order would be placed.)

#### Management of Contraceptive Supply

1) The Project Director should monitor the order quantities and supply levels. He should also assist in the completion of quarterly (or monthly) reports if necessary.

2) A regular calendar for ordering should be established and communicated by letter to all clinics. An example:

|                          |                         |
|--------------------------|-------------------------|
| Reports due the week of: | To receive supplies by: |
| April 1                  | April 10                |
| July 1                   | July 10                 |
| October 1                | October 10              |
| January 1                | January 10              |

3) New forms should be developed and implemented as needed; it is recommended that the project develop a " Daily Activity Register," a "Quarterly Report and Request" form, and a "Bordereau de Distribution," and that these forms be implemented at all project clinics.

For the stock cards currently in use, we recommend that a column be added for "Adjustments and Losses". Examples of such forms, which can be used in the development of project forms may be found in Appendix 5.

4) It is recommended that clinic and project staff receive training in the completion of forms and ordering procedures once the forms are ready to be used and decisions are made regarding the re-order intervals.

5) A procedures manual for supply management should be developed for the Project, including the reporting system and the inventory control procedures.

**APPENDIX 4**

**Examples of Basic Forms for Logistics Management**

# Bon de Distribution

Date \_\_\_\_\_ Expedier A \_\_\_\_\_

No. Bon de Distribution

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

| No. | Article | Quantite Distribuee |       | Commentaires |
|-----|---------|---------------------|-------|--------------|
|     |         | Expediee            | Recue |              |
| 1.  |         |                     |       |              |
| 2.  |         |                     |       |              |
| 3.  |         |                     |       |              |
| 4.  |         |                     |       |              |
| 5.  |         |                     |       |              |
| 6.  |         |                     |       |              |
| 7.  |         |                     |       |              |
| 8.  |         |                     |       |              |
| 9.  |         |                     |       |              |
| 10. |         |                     |       |              |
| 11. |         |                     |       |              |
| 12. |         |                     |       |              |

Approuve par \_\_\_\_\_ Date \_\_\_\_\_

Expedie par \_\_\_\_\_ Date \_\_\_\_\_

Recu par \_\_\_\_\_ Date \_\_\_\_\_







**APPENDIX 5**  
**Contraceptive Procurement Tables**

Country: Chad  
 Recipient: Ministry of Health  
 Product: 52mm Non Colored Sultan  
 Prepared by: Packard/Levin  
 Modified by: Packard/Levin

Date: 07/17/90  
 Time: 18:13  
 Prepared on: 06/07/90  
 Modified on: 06/07/90

CY1990 Contraceptive Requirements Estimate (1,000's)

|                                     | CY1988<br>Actual | CY1989<br>Actual | CY1990<br>Est | CY1991<br>Est | CY1992<br>Est |
|-------------------------------------|------------------|------------------|---------------|---------------|---------------|
| Beginning Stock                     | 0.0              | 498.0            | 1,573.0       | 919.0         | 727.0         |
| Estimated Consumption               |                  |                  |               |               |               |
| (a) Use/Sales/<br>Distribution      | 12.0             | 35.0             | 118.0         | 180.0         | 250.0         |
| (b) Transfer/Loss/<br>Disposal      |                  |                  | 536.0         | 12.0          | 12.0          |
| New Supply                          |                  |                  |               |               |               |
| (a) AID Shipments<br>Received       | 510.0            | 510.0            |               | NA            | NA            |
| (b) Future AID<br>Shipments         | NA               |                  |               |               | NA            |
| (c) Shipments from<br>Other Sources |                  | 600.0            |               |               | NA            |
| End of Yr Stock                     | 498.0            | 1,573.0          | 919.0         | 727.0         | NA            |
| Desired End of Year<br>Stock        | NA               | NA               | 192.0         | 262.0         | NA            |
| Net Situation                       |                  |                  |               |               |               |
| (a) Quantity Needed                 | NA               | NA               |               |               | NA            |
| (b) Surplus                         | NA               | NA               | 726.0         | 468.0         | NA            |
| Amount to Schedule                  | NA               | NA               |               |               | NA            |

0 Minimum stock (months): 6 Maximum stock (months): 12  
 1 Minimum stock (months): 6 Maximum stock (months): 12

Lead time (months): 3

**BEST AVAILABLE DOCUMENT**

Country: Chad  
Recipient: Ministry of Health  
Product: 52mm Non Colored Sultan  
Prepared by: Packard/Levin  
Modified by: Packard/Levin

Date: 07/17/90  
Time: 18:13  
Prepared on: 06/07/90  
Modified on: 06/07/90

CY1990 Contraceptive Requirements Estimate  
Footnotes

BEGINNING STOCK

Year: 1990

BOY stocks based on known shipments and current stocks..

ESTIMATED USE

Year: 1992

Estimated use for N'Djamena project based on information from clinics, approx 6000 pieces in 1989. Esat use also includes quantities distributed to various locations in the country mostly for AIDS prevention. AIDS condoms are stored with fp condoms.

ESTIMATED LOSS

Year: 1990

In 1990 there was estimated loss of 500,000 condoms, based on incomplete warehouse records that do not account for at least this quantity. Documentation at MOPH and at USAID is incomplete regarding shipments received although it is believed all three arrived.

Year: 1992

TRANSFERS of 36,000 in 1990, 12,000 in 1991, 12,000 in 1992 to new AID project in Sarh prefecture. Initial transfer already made in 1990, for fp and AIDS prevention. Distribution in Sarh has not yet begun.

SHIPMENTS FROM OTHER SOURCES

Year: 1989

Local WHO office provided 600,000 condoms received from A.I.D.

**BEST AVAILABLE DOCUMENT**

Country: Chad  
 Recipient: Ministry of Health  
 Product: Copper T, 380  
 Prepared by: Packard/Levin  
 Modified by: Packard/Levin

Date: 07/17/90

Time: 18:13  
 Prepared on: 06/07/90  
 Modified on: 06/07/90

CY1990 Contraceptive Requirements Estimate (1,000's)

|                                     | CY1988<br>Actual | CY1989<br>Actual | CY1990<br>Est | CY1991<br>Est | CY1992<br>Est |
|-------------------------------------|------------------|------------------|---------------|---------------|---------------|
| Beginning Stock                     | 0.0              | 7.2              | 6.7           | 5.9           | 4.6           |
| Estimated Consumption               |                  |                  |               |               |               |
| (a) Use/Sales/<br>Distribution      | 0.2              | 0.4              | 0.6           | 1.0           | 2.0           |
| (b) Transfer/Loss/<br>Disposal      |                  | 0.1              | 0.2           | 0.3           | 0.6           |
| New Supply                          |                  |                  |               |               |               |
| (a) AID Shipments<br>Received       | 7.4              |                  |               | NA            | NA            |
| (b) Future AID<br>Shipments         | NA               |                  |               |               | NA            |
| (c) Shipments from<br>Other Sources |                  |                  |               |               | NA            |
| End of Yr Stock                     | 7.2              | 6.7              | 5.9           | 4.6           | NA            |
| Desired End of Year<br>Stock        | NA               | NA               | 1.3           | 2.6           | NA            |
| Net Situation                       |                  |                  |               |               |               |
| (a) Quantity Needed                 | NA               | NA               |               |               | NA            |
| (b) Surplus                         | NA               | NA               | 4.6           | 2.0           | NA            |
| Amount to Schedule                  | NA               | NA               |               |               | NA            |

0 Minimum stock (months): 6 Maximum stock (months): 12  
 1 Minimum stock (months): 6 Maximum stock (months): 12

Lead time (months): 3

**BEST AVAILABLE DOCUMENT**

Country: Chad  
Recipient: Ministry of Health  
Product: Copper T, 380  
Prepared by: Packard/Levin  
Modified by: Packard/Levin

Date: 07/17/90  
Time: 18:13  
Prepared on: 06/07/90  
Modified on: 06/07/90

CY1990 Contraceptive Requirements Estimate  
Footnotes

BEGINNING STOCK

Year: 1990

Stock figures are based on current stocks in central warehouse and main clinic.

ESTIMATED USE

Year: 1992

Use is based on clinic records and planned expansion.

ESTIMATED LOSS

Year: 1992

TRANSFERS to new AID project in Sarh.

**BEST AVAILABLE DOCUMENT**

Country: Chad  
 Recipient: Ministry of Health  
 Product: 3-month injectable NORISTE  
 Prepared by: Packard/Levin  
 Modified by: Packard/Levin

Date: 07/17/90  
 Time: 18:13  
 Prepared on: 06/19/90  
 Modified on: 06/19/90

CY1990 Contraceptive Requirements Estimate (1,000's)

|                                     | CY1988<br>Actual | CY1989<br>Actual | CY1990<br>Est | CY1991<br>Est | CY1992<br>Est |
|-------------------------------------|------------------|------------------|---------------|---------------|---------------|
| Beginning Stock                     | 0.0              | 1.6              | 1.0           | 0.0           | 0.0           |
| Estimated Consumption               |                  |                  |               |               |               |
| (a) Use/Sales/<br>Distribution      | 0.4              | 0.6              | 1.0           | 1.4           | 2.0           |
| (b) Transfer/Loss/<br>Disposal      |                  |                  | 0.2           | 0.5           | 1.0           |
| New Supply                          |                  |                  |               |               |               |
| (a) AID Shipments<br>Received       |                  |                  |               | NA            | NA            |
| (b) Future AID<br>Shipments         | NA               |                  |               |               | NA            |
| (c) Shipments from<br>Other Sources | 2.0              |                  |               |               | NA            |
| End of Yr Stock                     | 1.6              | 1.0              | -0.2          | -1.9          | NA            |
| Desired End of Year<br>Stock        | NA               | NA               | 1.9           | 3.0           | NA            |
| Net Situation                       |                  |                  |               |               |               |
| (a) Quantity Needed                 | NA               | NA               | 2.1           | 4.9           | NA            |
| (b) Surplus                         | NA               | NA               |               |               | NA            |
| Amount to Schedule                  | NA               | NA               |               |               | NA            |

0 Minimum stock (months): 6 Maximum stock (months): 12  
 1 Minimum stock (months): 6 Maximum stock (months): 12

Lead time (months): 3

**BEST AVAILABLE DOCUMENT**

Country: Chad  
Recipient: Ministry of Health  
Product: 3-month injectable NORISTE  
Prepared by: Packard/Levin  
Modified by: Packard/Levin

Date: 07/17/90  
Time: 18:14  
Prepared on: 06/19/90  
Modified on: 06/19/90

CY1990 Contraceptive Requirements Estimate  
Footnotes

BEGINNING STOCK

Year: 1990

Shipment information from UNFPA is not available. Stocks estimated on the basis of recorded quantities dispensed and current stocks (nearly nil).

ESTIMATED USE

Year: 1992

Estimated use for N'Djamena project based on clinic records. Transfers to Sarh project estimated beginning 1990.

ESTIMATED LOSS

Year: 1992

Transfers to Sarh AID project expected to begin in late 1990.

ORDER AMOUNT

Year: 1990

Deficit will occur unless UNFPA and WHO expedite standing order.

**BEST AVAILABLE DOCUMENT**

Country: Chad  
 Recipient: Ministry of Health  
 Product: Lo-Femeral, Blue Lady  
 Prepared by: Elise Levin/Jack Packard  
 Modified by: Elise Levin/Jack Packard

Date: 07/17/90  
 Time: 18:14  
 Prepared on: 05/29/90  
 Modified on: 05/29/90

CY1990 Contraceptive Requirements Estimate (1,000's)

|                                     | CY1988<br>Actual | CY1989<br>Actual | CY1990<br>Est | CY1991<br>Est | CY1992<br>Est |
|-------------------------------------|------------------|------------------|---------------|---------------|---------------|
|                                     | -----            | -----            | -----         | -----         | -----         |
| Beginning Stock                     | 0.0              | 269.8            | 263.9         | 259.7         | 254.5         |
| Estimated Consumption               |                  |                  |               |               |               |
| (a) Use/Sales/<br>Distribution      | 0.2              | 0.9              | 3.0           | 4.0           | 8.0           |
| (b) Transfer/Loss/<br>Disposal      |                  | 5.0              | 1.2           | 1.2           | 2.4           |
| New Supply                          |                  |                  |               |               |               |
| (a) AID Shipments<br>Received       | 270.0            |                  |               | NA            | NA            |
| (b) Future AID<br>Shipments         | NA               |                  |               |               | NA            |
| (c) Shipments from<br>Other Sources |                  |                  |               |               | NA            |
| End of Yr Stock                     | 269.8            | 263.9            | 259.7         | 254.5         | NA            |
| Desired End of Year<br>Stock        | NA               | NA               | 5.2           | 10.4          | NA            |
| Net Situation                       |                  |                  |               |               |               |
| a) Quantity Needed                  | NA               | NA               |               |               | NA            |
| b) Surplus                          | NA               | NA               | 254.4         | 243.6         | NA            |
| Amount to Schedule                  | NA               | NA               |               |               | NA            |

0 Minimum stock (months): 6 Maximum stock (months): 12  
 1 Minimum stock (months): 6 Maximum stock (months): 12

Lead time (months): 3

**BEST AVAILABLE DOCUMENT**

Country: Chad  
Recipient: Ministry of Health  
Product: Lo-Femeral, Blue Lady  
Prepared by: Elise Levin/Jack Packard  
Modified by: Elise Levin/Jack Packard

Date: 07/17/90  
Time: 18:15  
Prepared on: 05/29/90  
Modified on: 05/29/90

CY1990 Contraceptive Requirements Estimate  
Footnotes

BEGINNING STOCK

Year: 1990

This represents stock at all distribution points in N'Djamena.

. ESTIMATED USE

Year: 1992

Estimated use is based on ledgers at clinics. Future use includes compensation for stockout of other brands.

. ESTIMATED LOSS

Year: 1990

1200 cycles for transfer to Sarh project.

Year: 1992

A minimum of five thousand cycles are unaccounted for in stock data or dispensed to users data.

**BEST AVAILABLE DOCUMENT**

Country: Chad  
 Recipient: Ministry of Health  
 Product: Ovrette  
 Prepared by: Levin/Packard  
 Modified by: Levin/Packard

Date: 07/17/90  
 Time: 18:15  
 Prepared on: 06/07/90  
 Modified on: 06/07/90

CY1990 Contraceptive Requirements Estimate (1,000's)

|                                     | CY1988<br>Actual | CY1989<br>Actual | CY1990<br>Est | CY1991<br>Est | CY1992<br>Est |
|-------------------------------------|------------------|------------------|---------------|---------------|---------------|
| Beginning Stock                     | 0.0              | 269.6            | 228.6         | 225.4         | 220.2         |
| Estimated Consumption               |                  |                  |               |               |               |
| (a) Use/Sales/<br>Distribution      | 0.4              | 1.0              | 2.0           | 4.0           | 8.0           |
| (b) Transfer/Loss/<br>Disposal      |                  | 40.0             | 1.2           | 1.2           | 1.2           |
| New Supply                          |                  |                  |               |               |               |
| (a) AID Shipments<br>Received       | 270.0            |                  |               | NA            | NA            |
| (b) Future AID<br>Shipments         | NA               |                  |               |               | NA            |
| (c) Shipments from<br>Other Sources |                  |                  |               |               | NA            |
| End of Yr Stock                     | 269.6            | 228.6            | 225.4         | 220.2         | NA            |
| Desired End of Year<br>Stock        | NA               | NA               | 5.2           | 9.2           | NA            |
| Net Situation                       |                  |                  |               |               |               |
| (a) Quantity Needed                 | NA               | NA               |               |               | NA            |
| (b) Surplus                         | NA               | NA               | 220.8         | 211.2         | NA            |
| Amount to Schedule                  | NA               | NA               |               |               | NA            |

10 Minimum stock (months): 6 Maximum stock (months): 12  
 11 Minimum stock (months): 6 Maximum stock (months): 12

Lead time (months): 3

Country: Chad  
Recipient: Ministry of Health  
Product: Ovrette  
Prepared by: Levin/Packard  
Modified by: Levin/Packard

Date: 07/17/90  
Time: 18:15  
Prepared on: 06/07/90  
Modified on: 06/07/90

CY1990 Contraceptive Requirements Estimate  
Footnotes

BEGINNING STOCK

Year: 1990

Stocks include all distribution points in N'Djamena.

ESTIMATED USE

Year: 1992

Estimated use is based on clinic ledgers for two years. Future use takes into account sizeable stock of Microlut, comparable OC.

ESTIMATED LOSS

Year: 1989

Estimated loss of 40,000 cycles is a minimum quantity that is not accounted for in stocks, stock data, or dispensed to user data.

**BEST AVAILABLE DOCUMENT**

Country: Chad  
 Recipient: Ministry of Health  
 Product: Conceptrol Foaming Tablet  
 Prepared by: Levin/Packard  
 Modified by: Levin/Packard

Date: 07/17/90  
 Time: 18:16  
 Prepared on: 06/19/90  
 Modified on: 06/19/90

CY1990 Contraceptive Requirements Estimate (1,000's)

|                                    | CY1988<br>Actual | CY1989<br>Actual | CY1990<br>Est | CY1991<br>Est | CY1992<br>Est |
|------------------------------------|------------------|------------------|---------------|---------------|---------------|
| Beginning Stock                    | 0.0              | 8.6              | 0.6           | 14.6          | 26.6          |
| Estimated Consumption              |                  |                  |               |               |               |
| a) Use/Sales/<br>Distribution      | 1.0              | 8.0              | 10.0          | 12.0          | 15.0          |
| b) Transfer/Loss/<br>Disposal      |                  |                  | 4.8           | 4.8           | 9.6           |
| New Supply                         |                  |                  |               |               |               |
| a) AID Shipments<br>Received       | 9.6              |                  |               | NA            | NA            |
| b) Future AID<br>Shipments         | NA               |                  |               |               | NA            |
| c) Shipments from<br>Other Sources |                  |                  |               |               | NA            |
| End of Yr Stock                    | 8.6              | 0.6              | -14.2         | -2.2          | NA            |
| Desired End of Year<br>Stock       | NA               | NA               | 16.8          | 24.6          | NA            |
| Net Situation                      |                  |                  |               |               |               |
| a) Quantity Needed                 | NA               | NA               | 28.8          | 28.8          | NA            |
| b) Surplus                         | NA               | NA               |               |               | NA            |
| Amount to Schedule                 | NA               | NA               | 28.8          | 28.8          | NA            |

Minimum stock (months): 6 Maximum stock (months): 12  
 Minimum stock (months): 6 Maximum stock (months): 12

Lead time (months): 3

**BEST AVAILABLE DOCUMENT**

Country: Chad  
Recipient: Ministry of Health  
Product: Conceptrol Foaming Tablet  
Prepared by: Levin/Packard  
Modified by: Levin/Packard

Date: 07/17/90  
Time: 18:16  
Prepared on: 06/19/90  
Modified on: 06/19/90

CY1990 Contraceptive Requirements Estimate  
Footnotes

BEGINNING STOCK

Year: 1990

Current stocks are nearly nil. One shipment of 9600 tablets was made in 1988. Little clinic data exist due to irregular supply.

ESTIMATED USE

Year: 1992

Use is based on one-time distribution of 9600 tablets

ESTIMATED LOSS

Year: 1992

TRANSFER of product to AID project in Sarh. Project is expected to begin late 1990.

**BEST AVAILABLE DOCUMENT**

Country: Chad  
 Recipient: World Health Organization (OMS)  
 Product: 52mm Non Colored Sultan  
 Prepared by: Levin/Packard  
 Modified by: Levin/Packard

Date: 07/17/90  
 Time: 18:21  
 Prepared on: 06/04/90  
 Modified on: 06/04/90

CY1990 Contraceptive Requirements Estimate ~~(1,000's)~~ (in UNITS)

|                                     | CY1988<br>Actual | CY1989<br>Actual | CY1990<br>Est | CY1991<br>Est | CY1992<br>Est |
|-------------------------------------|------------------|------------------|---------------|---------------|---------------|
| Beginning Stock                     | 0.0              | 0.0              | 0.0           | 0.0           | 0.0           |
| Estimated Consumption               |                  |                  |               |               |               |
| (a) Use/Sales/<br>Distribution      |                  |                  |               |               |               |
| (b) Transfer/Loss/<br>Disposal      |                  | 600.0            |               |               |               |
| New Supply                          |                  |                  |               |               |               |
| (a) AID Shipments<br>Received       |                  | 600.0            |               | NA            | NA            |
| (b) Future AID<br>Shipments         | NA               |                  |               |               | NA            |
| (c) Shipments from<br>Other Sources |                  |                  |               |               | NA            |
| End of Yr Stock                     | 0.0              | 0.0              | 0.0           | 0.0           | NA            |
| Desired End of Year<br>Stock        | NA               | NA               |               |               | NA            |
| Net Situation                       |                  |                  |               |               |               |
| a) Quantity Needed                  | NA               | NA               |               |               | NA            |
| b) Surplus                          | NA               | NA               |               |               | NA            |
| Amount to Schedule                  | NA               | NA               |               |               | NA            |

0 Minimum stock (months): 6 Maximum stock (months): 9  
 1 Minimum stock (months): 6 Maximum stock (months): 9  
 2 Minimum stock (months): 3

**BEST AVAILABLE DOCUMENT**

Country: Chad  
Recipient: World Health Organization (OMS)  
Product: 52mm Non Colored Sultan  
Prepared by: Levin/Packard  
Modified by: Levin/Packard

Date: 07/17/90

Time: 18:21

Prepared on: 06/04/90

Modified on: 06/04/90

CY1990 Contraceptive Requirements Estimate  
Footnotes

BEGINNING STOCK

Year: 1990

Per USAID/N'Djamena

ESTIMATED USE

Year: 1992

Condoms are currently stored at the MOPH warehouse, PASP. There are no inventory records prior to 1990. Distribution has been irregular, to unknown recipients, in various prefectures.

ESTIMATED LOSS

Year: 1992

TRANSFER to MOPH warehouse (PASP) where condoms are stored and distributed with other stocks of condoms. See MOH 52ns CPT.

**BEST AVAILABLE DOCUMENT**

Country: Chad  
 Recipient: Sarh Project  
 Product: 52mm Non Colored Sultan  
 Prepared by: Levin/Packard  
 Modified by: Levin/Packard

Date: 07/17/90  
 Time: 18:16  
 Prepared on: 06/04/90  
 Modified on: 06/04/90

CY1990 Contraceptive Requirements Estimate ~~(1,000's)~~ (in UNITS)

|                                     | CY1988<br>Actual | CY1989<br>Actual | CY1990<br>Est | CY1991<br>Est | CY1992<br>Est |
|-------------------------------------|------------------|------------------|---------------|---------------|---------------|
|                                     | -----            | -----            | -----         | -----         | -----         |
| Beginning Stock                     | 0.0              | 0.0              | 0.0           | 1,998.0       | 4,000.0       |
| Estimated Consumption               |                  |                  |               |               |               |
| (a) Use/Sales/<br>Distribution      |                  |                  |               | 2,000.0       | 4,000.0       |
| (b) Transfer/Loss/<br>Disposal      |                  |                  |               |               |               |
| New Supply                          |                  |                  |               |               |               |
| (a) AID Shipments<br>Received       |                  |                  |               | NA            | NA            |
| (b) Future AID<br>Shipments         | NA               |                  |               |               | NA            |
| (c) Shipments from<br>Other Sources |                  |                  |               |               | NA            |
| End of Yr Stock                     | 0.0              | 0.0              | 0.0           | -2.0          | NA            |
| Desired End of Year<br>Stock        | NA               | NA               | 2,000.0       | 4,000.0       | NA            |
| Net Situation                       |                  |                  |               |               |               |
| a) Quantity Needed                  | NA               | NA               | 1,998.0       | 4,002.0       | NA            |
| b) Surplus                          | NA               | NA               |               |               | NA            |
| Amount to Schedule                  | NA               | NA               | 1,998.0       | 4,002.0       | NA            |

0 Minimum stock (months): 6 Maximum stock (months): 12  
 1 Minimum stock (months): 6 Maximum stock (months): 12

Lead time (months): 3

BEST AVAILABLE DOCUMENT

Country: Chad  
Client: Sarh Project  
Product: 52mm Non Colored Sultan  
Prepared by: Levin/Packard  
Modified by: Levin/Packard

Date: 07/17/90  
Time: 18:17  
Prepared on: 06/04/90  
Modified on: 06/04/90

CY1990 Contraceptive Requirements Estimate  
Footnotes

BEGINNING STOCK

Year: 1990

Per USAID N'Djamena.

ESTIMATED USE

Year: 1992

Estimates based on use in N'Djamena and estimated number of clients and method mix. See trip report.

**BEST AVAILABLE DOCUMENT**

Country: Chad  
 Client: Sarh Project  
 Product: Copper T, 380  
 Prepared by: Packard/Levin  
 Modified by: Packard/Levin

Date: 07/17/90  
 Time: 18:17  
 Prepared on: 06/07/90  
 Modified on: 06/07/90

CY1990 Contraceptive Requirements Estimate ~~(1,000's)~~ (in UNITS)

|                                    | CY1988<br>Actual | CY1989<br>Actual | CY1990<br>Est | CY1991<br>Est | CY1992<br>Est |
|------------------------------------|------------------|------------------|---------------|---------------|---------------|
| Beginning Stock                    | 0.0              | 0.0              | 10.0          | 100.0         | 120.0         |
| Estimated Consumption              |                  |                  |               |               |               |
| (a) Use/Sales/<br>Distribution     |                  | 50.0             | 50.0          | 100.0         | 120.0         |
| (b) Transfer/Loss/<br>Disposal     |                  |                  |               |               |               |
| New Supply                         |                  |                  |               |               |               |
| a) AID Shipments<br>Received       |                  |                  |               | NA            | NA            |
| b) Future AID<br>Shipments         | NA               |                  |               |               | NA            |
| c) Shipments from<br>Other Sources |                  | 60.0             | 50.0          |               | NA            |
| End of Yr Stock                    | 0.0              | 10.0             | 10.0          | 0.0           | NA            |
| Desired End of Year<br>Stock       | NA               | NA               | 100.0         | 120.0         | NA            |
| Net Situation                      |                  |                  |               |               |               |
| a) Quantity Needed                 | NA               | NA               | 90.0          | 120.0         | NA            |
| b) Surplus                         | NA               | NA               |               |               | NA            |
| Amount to Schedule                 | NA               | NA               | 90.0          | 120.0         | NA            |

3 Minimum stock (months): 6 Maximum stock (months): 12  
 1 Minimum stock (months): 6 Maximum stock (months): 12

4 time (months): 3

BEST AVAILABLE DOCUMENT

Country: Chad  
Recipient: Sarh Project  
Product: Copper T, 380  
Prepared by: Packard/Levin  
Modified by: Packard/Levin

Date: 07/17/90

Time: 18:18

Prepared on: 06/07/90

Modified on: 06/07/90

CY1990 Contraceptive Requirements Estimate  
Footnotes

BEGINNING STOCK

Year: 1990

Stock figures based on information from USAID.

ESTIMATED USE

Year: 1992

Current use is estimated on the basis of little information. Currently one nurse is providing services. Future use estimates based on project implementation in 1991.

**BEST AVAILABLE DOCUMENT**

Country: Chad  
 Recipient: Sarh Project  
 Product: 3-month injectable NORISTE  
 Prepared by: Packard/Levin  
 Modified by: Packard/Levin

Date: 07/17/90  
 Time: 18:18  
 Prepared on: 06/04/90  
 Modified on: 06/04/90

CY1990 Contraceptive Requirements Estimate (~~1,000's~~ Lin UNITS)

|                                     | CY1988<br>Actual | CY1989<br>Actual | CY1990<br>Est | CY1991<br>Est | CY1992<br>Est |
|-------------------------------------|------------------|------------------|---------------|---------------|---------------|
| Beginning Stock                     | 0.0              | 0.0              | 0.0           | 100.0         | 250.0         |
| Estimated Consumption               |                  |                  |               |               |               |
| (a) Use/Sales/<br>Distribution      |                  |                  |               | 100.0         | 250.0         |
| (b) Transfer/Loss/<br>Disposal      |                  |                  |               |               |               |
| New Supply                          |                  |                  |               |               |               |
| (a) AID Shipments<br>Received       |                  |                  |               | NA            | NA            |
| (b) Future AID<br>Shipments         | NA               |                  |               |               | NA            |
| (c) Shipments from<br>Other Sources |                  |                  |               |               | NA            |
| End of Yr Stock                     | 0.0              | 0.0              | 0.0           | 0.0           | NA            |
| Desired End of Year<br>Stock        | NA               | NA               | 100.0         | 250.0         | NA            |
| Net Situation                       |                  |                  |               |               |               |
| a) Quantity Needed                  | NA               | NA               | 100.0         | 250.0         | NA            |
| b) Surplus                          | NA               | NA               |               |               | NA            |
| Amount to Schedule                  | NA               | NA               | 100.0         | 250.0         | NA            |

0 Minimum stock (months): 6 Maximum stock (months): 12  
 1 Minimum stock (months): 6 Maximum stock (months): 12

Lead time (months): 3

**BEST AVAILABLE DOCUMENT**

Country: Chad  
Recipient: Sarh Project  
Product: 3-month injectable NORISTE  
Prepared by: Packard/Levin  
Modified by: Packard/Levin

Date: 07/17/90  
Time: 18:19  
Prepared on: 06/04/90  
Modified on: 06/04/90

CY1990 Contraceptive Requirements Estimate  
Footnotes

BEGINNING STOCK

Year: 1990

Per USAID N'Djamena.

ESTIMATED USE

Year: 1992

Use estimated on the basis of ten percent of clients during Year 1,  
with three additional clinics in Year 2.

**BEST AVAILABLE DOCUMENT**

Country: Chad  
 Recipient: Sarh Project  
 Product: Lo-Femeral, Blue Lady  
 Prepared by: Levin/Packard  
 Modified by: Levin/Packard

Date: 07/17/90  
 Time: 18:19  
 Prepared on: 06/04/90  
 Modified on: 06/04/90

CY1990 Contraceptive Requirements Estimate (~~4,000's~~) (in UNITS) (cycles)  
 CY1992

|                                     | CY1988<br>Actual | CY1989<br>Actual | CY1990<br>Est | CY1991<br>Est | CY1992<br>Est |
|-------------------------------------|------------------|------------------|---------------|---------------|---------------|
| Beginning Stock                     | 0.0              | 0.0              | 0.0           | 1,575.6       | 2,500.2       |
| Estimated Consumption               |                  |                  |               |               |               |
| (a) Use/Sales/<br>Distribution      |                  |                  |               | 1,575.0       | 2,500.0       |
| (b) Transfer/Loss/<br>Disposal      |                  |                  |               |               |               |
| New Supply                          |                  |                  |               |               |               |
| (a) AID Shipments<br>Received       |                  |                  |               | NA            | NA            |
| (b) Future AID<br>Shipments         | NA               |                  |               |               | NA            |
| (c) Shipments from<br>Other Sources |                  |                  | 1,200.0       |               | NA            |
| End of Yr Stock                     | 0.0              | 0.0              | 1,200.0       | 0.6           | NA            |
| Desired End of Year<br>Stock        | NA               | NA               | 1,575.0       | 2,500.0       | NA            |
| Net Situation                       |                  |                  |               |               |               |
| a) Quantity Needed                  | NA               | NA               | 375.6         | 2,499.6       | NA            |
| b) Surplus                          | NA               | NA               |               |               | NA            |
| Amount to Schedule                  | NA               | NA               | 375.6         | 2,499.6       | NA            |

0 Minimum stock (months): 6 Maximum stock (months): 12  
 1 Minimum stock (months): 6 Maximum stock (months): 12  
 d time (months): 3

BEST AVAILABLE DOCUMENT

Country: Chad  
Client: Sarh Project  
Product: Lo-Femeral, Blue Lady  
Prepared by: Levin/Packard  
Modified by: Levin/Packard

Date: 07/17/90  
Time: 18:19  
Prepared on: 06/04/90  
Modified on: 06/04/90

CY1990 Contraceptive Requirements Estimate  
Footnotes

BEGINNING STOCK

Year: 1990

Based on information from USAID N'Djamena.

ESTIMATED USE

Year: 1992

Use is estimated on the basis of an expected number of clients for Year 1 and an estimated method mix. No estimates had been made for the project previously. Population data for Sarh were not available. Estimated 120 users for Year 1 for three clinics.

BEST AVAILABLE DOCUMENT

Country: Chad  
 Recipient: Sarh Project  
 Product: Ovrette  
 Prepared by: Packard/Levin  
 Modified by: Packard/Levin

Date: 07/17/90

Time: 18:19  
 Prepared on: 06/04/90  
 Modified on: 06/04/90

CY1990 Contraceptive Requirements Estimate (~~4,000's~~) (in UNITS (cycles))

|                                     | CY1988<br>Actual | CY1989<br>Actual | CY1990<br>Est | CY1991<br>Est | CY1992<br>Est |
|-------------------------------------|------------------|------------------|---------------|---------------|---------------|
| Beginning Stock                     | 0.0              | 0.0              | 0.0           | 1,200.0       | 799.8         |
| Estimated Consumption               |                  |                  |               |               |               |
| (a) Use/Sales/<br>Distribution      |                  |                  |               | 525.0         | 800.0         |
| (b) Transfer/Loss/<br>Disposal      |                  |                  |               |               |               |
| New Supply                          |                  |                  |               |               |               |
| (a) AID Shipments<br>Received       |                  |                  |               | NA            | NA            |
| (b) Future AID<br>Shipments         | NA               |                  |               |               | NA            |
| (c) Shipments from<br>Other Sources |                  |                  | 1,200.0       |               | NA            |
| End of Yr Stock                     | 0.0              | 0.0              | 1,200.0       | 675.0         | NA            |
| Desired End of Year<br>Stock        | NA               | NA               | 525.0         | 800.0         | NA            |
| Net Situation                       |                  |                  |               |               |               |
| a) Quantity Needed                  | NA               | NA               |               | 124.8         | NA            |
| b) Surplus                          | NA               | NA               | 675.6         |               | NA            |
| Amount to Schedule                  | NA               | NA               |               | 124.8         | NA            |

0 Minimum stock (months): 6 Maximum stock (months): 12  
 1 Minimum stock (months): 6 Maximum stock (months): 12  
 d time (months): 3

BEST AVAILABLE DOCUMENT

Country: Chad  
Recipient: Sarh Project  
Product: Ovrette  
Prepared by: Packard/Levin  
Modified by: Packard/Levin

Date: 07/17/90  
Time: 18:20  
Prepared on: 06/04/90  
Modified on: 06/04/90

CY1990 Contraceptive Requirements Estimate  
Footnotes

BEGINNING STOCK

Year: 1990

Per USAID N'Djamena.

1. ESTIMATED USE

Year: 1992

See Lofemenal note. Use expected to increase during 1991 due to additional clients and additional clinics opening in Year 2.

**BEST AVAILABLE DOCUMENT**

Country: Chad  
 Recipient: Sarh Project  
 Product: Conceptrol Foaming Tablet  
 Prepared by: Packard/Levin  
 Modified by: Packard/Levin

Date: 07/17/90

Time: 18:20  
 Prepared on: 06/04/90  
 Modified on: 06/04/90

CY1990 Contraceptive Requirements Estimate (~~1,000's~~) (in UNITS)

|                                     | CY1988<br>Actual | CY1989<br>Actual | CY1990<br>Est | CY1991<br>Est | CY1992<br>Est |
|-------------------------------------|------------------|------------------|---------------|---------------|---------------|
| . Beginning Stock                   | 0.0              | 0.0              | 0.0           | 3,000.0       | 5,193.6       |
| . Estimated Consumption             |                  |                  |               |               |               |
| (a) Use/Sales/<br>Distribution      |                  |                  |               | 3,000.0       | 5,200.0       |
| (b) Transfer/Loss/<br>Disposal      |                  |                  |               |               |               |
| New Supply                          |                  |                  |               |               |               |
| (a) AID Shipments<br>Received       |                  |                  |               | NA            | NA            |
| (b) Future AID<br>Shipments         | NA               |                  |               |               | NA            |
| (c) Shipments from<br>Other Sources |                  |                  |               |               | NA            |
| End of Yr Stock                     | 0.0              | 0.0              | 0.0           | 0.0           | NA            |
| Desired End of Year<br>Stock        | NA               | NA               | 3,000.0       | 5,200.0       | NA            |
| Net Situation                       |                  |                  |               |               |               |
| (a) Quantity Needed                 | NA               | NA               | 3,000.0       | 5,198.4       | NA            |
| (b) Surplus                         | NA               | NA               |               |               | NA            |
| Amount to Schedule                  | NA               | NA               | 3,000.0       | 5,193.6       | NA            |

90 Minimum stock (months): 6 Maximum stock (months): 12  
 91 Minimum stock (months): 6 Maximum stock (months): 12

Lead time (months): 3

Country: Chad  
Recipient: Sarh Project  
Product: Conceptrol Foaming Tablet  
Prepared by: Packard/Levin  
Modified by: Packard/Levin

Date: 07/17/90  
Time: 18:21  
Prepared on: 06/04/90  
Modified on: 06/04/90

CY1990 Contraceptive Requirements Estimate  
Footnotes

BEGINNING STOCK Year: 1990

Per USAID N'Djamena.

ESTIMATED USE Year: 1992

See Lofemenal note. Estimated use based on 120 clients for Year 1.

**BEST AVAILABLE DOCUMENT**