

NIGERIA

July 22 - August 14, 1992

Contraceptive Logistics Management Assistance

to

the Family Health Services Project,

USAID/Lagos,

and

the Federal Ministry of Health

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I. Summary

**Federal Ministry of Health Plan to Operate Public Sector
Contraceptive Logistics System**

The World Bank report on the design and implementation of a Federally operated public sector logistics system appears comprehensive and practical. While differences of opinion exist on details of the plan, there is overall agreement on the basic elements of the system's design and implementation schedule (Appendix 2 is a copy of the report in its entirety, and Appendix 3 reflects the FHS project's support of the plan).

Areas which require further discussion include mechanisms for FHS/FMOH collaboration on forecasting, monitoring of commodity distribution, levels of maximum reserve stocks to be maintained, and the pace of training of staff at various levels of the system.

Reorganization of FHS Project and Reorganization Transition Plan

The operation of the public sector logistics system by the FMOH, and changes in the context in which the system and the FHS project operate, including the departure of FPIA in February, 1993, the end of Pathfinder's current contract in April, 1993, the termination of free Sterling storage and distribution in October, 1992, and the beginning of the FHS II project in January, 1994 require adjustment of the project structure, and a transition plan to effect this adjustment without interrupting the project's effective support of the logistics system.

This report proposes the creation of a Contraceptive Logistics Management Unit within the FHS project and suggests a process through which the functions now performed by FPIA and Pathfinder may be gradually transferred to the new unit. A complete transition timetable was not developed during this consultancy although the range of logistics systems management functions carried out by FPIA and Pathfinder were identified, and procedures outlined for the continuation of transition planning, and the growth of the proposed unit.

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Family Planning Distribution Survey Preliminary Reports

Appendix 4 provides examples of preliminary reports being developed by the Johns Hopkins University PCS project as part of its initial effort to identify and classify ... "all facilities which could or do dispense/distribute family planning products and services." The reports represent a valuable source of information useful for the implementation and operation of the FMOH public sector contraceptive logistics system.

Status of Contraceptive Supplies

Current supplies of public sector stocks now in country or in the pipeline to Nigeria appear adequate to prevent widespread stockouts but do not appear to be sufficient to provide desired levels of "start-up" stocks when the Federal government begins to operate the system on December 1. This concern may prove unfounded but final judgement on this issue cannot be made until additional information is received as to the timing and size of future FPIA shipments.

One shipment is planned for departure from the United States in mid-August and, barring unforeseen delays in shipment or clearance, should arrive in mid to late September or early October. However, the quantities in this shipment will not raise reserves to the desired start-up levels, particularly in view of the increased length of the pipeline within Nigeria, which will include for the first time, a zonal segment.

Additional information on stocks currently held or ordered by FPIA, as well as on stocks intended for shipment, is also needed for the purpose of ensuring continuity of supplies in the period immediately prior to and following the end of FPIA's contract and the FHS project's assumption of direct responsibility for procurement of contraceptives.

Training and Other Logistics Management Technical Assistance

Training, particularly of newly appointed central and zonal staff, is clearly the area where FHS project assistance will be of most immediate value to the FMOH's successful initiation of the new system. Assuming the assignment of a high priority to this activity by the FMOH, AID/W, and the FHS project, training of staff at these levels could be provided by the FPLM project as

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early as October.

The most urgent concern in this area is that the FMOH appoint the new central and zonal staff as quickly as possible so that individual needs assessments can be conducted, and curricula developed.

Arrangements are in process for one key FMOH central staff person and two FHS project staff to attend an FPLM logistics management training course in the United States in mid-September.

The visit of an AID/CDC/FPLM TA team in September/October will enable the FHS project to provide assistance to the FMOH in forecasting contraceptive requirements for CY93, and assist the Ministry during the first phase of implementing the new system.

Recommendations reflecting these observations and concerns follow.

Recommendation 1: The A.A.O. and Project Administrator should explore with AID/W (R&D/POP/CPSD), the possibility of having clearance through the port of Lagos included as part of analpina's contract for shipment of USAID contraceptives to Nigeria.

Recommendation 2: USAID should apply for duty-free entry and clearance of all USAID contraceptive shipments.

Recommendation 3: A Contraceptive Logistics Management Unit should be formally established within the FHS project as soon as possible, and staffed with at least two people. Unit priorities should be:

- continued development of the transition plan, particularly, a time table for transfer to the new unit of the functions identified at the unit development workshop (see Section V., B. for details of workshop and functions identified);
- the convening of at least bi-weekly meetings of the workshop participants, to assist with the accomplishment of the above objective (it is suggested this group be renamed the Transition Task Force);

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- periodic meetings with FMOH staff charged with implementing the new Federal system, and, in particular, with Dr. Fred B. Adenika, the consultant employed by the FMOH to assist it in this task - particular attention should be paid to the development of collaborative procedures and policies in the areas of forecasting, and monitoring, and to specific events or activities in the near future requiring joint action - such as the shift of public sector contraceptives from the Sterling warehouse to the Ministry's Oshodi warehouse by October 31;
- monitoring the status of contraceptive supplies;
- the development of a unit table of organization including staff requirements and position descriptions.

Recommendation 4: The FHS project should cable R&D/POP/CPSD requesting that the project be informed, as quickly as possible, as to :

- what public sector contraceptive stocks are currently on hand in FPIA's United States warehouse;
- what public sector contraceptive stocks are on order;
- what quantities of public sector stocks are planned for shipment (following the August shipment);
- the intended date or dates of the next shipments.

Recommendation 5: The FHS project should cable R&D/POP/CPSD requesting an AID/CDC/FPLM TA team visit in September/October, 1992 for the purposes of assisting the FMOH and FHS staff forecast CY93 contraceptive requirements and complete CY93 CPT's, and in planning for Federal operation of the public sector logistics system, and the FHS II project. The possibility of having Tim Rosche, Lome based FPLM Regional Logistics Advisor for West Africa, included in the team for this visit should be explored with FPLM and R&D/POP/CPSD.

Recommendation 6: To ensure a successful start for the system and its continued effective and efficient functioning, newly assigned personnel should be trained in both general logistics concepts and in the specific procedures of the new system.

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Recommendation 7: Standard methodologies should be developed for determining routine reorder quantities and for estimating longer term commodity needs.

Recommendation 8: We agree in principle with the groups to be trained and with the basic subject matter, but recommend modest revisions in the composition of the groups to be trained together (see matrix page 27).

Recommendation 9: Training of lower level personnel should be completed in phases according to priority need. These priorities should be determined in consultations between FMOH/PHC and FHS staff.

Recommendation 10: Initial training of central and zonal level personnel can be developed and funded by FPLM. We recommend that the training team consist of a FPLM trainer, a member of the FHS project training staff (or a Training Network consultant) and a FPLM/CDC logistics advisor serving as a technical resource.

Recommendation 11: Training of state, LGA, and possibly SDP personnel, and any refresher training of central and zonal staff, should be conducted using already existing in-country resources of the public sector Training Network. Such training should be conducted only after follow-up evaluation of the initial training done for central and zonal level personnel and assessment of the functioning of the new distribution system.

Recommendation 12: Individual needs assessments should be accomplished prior to each logistics management training in order to ensure that the specific logistics problems of each group are addressed.

Recommendation 13: Follow-up evaluations should be conducted for all workshops. FPLM/CDC advisors should participate in at least one of such follow-up visits in 1993.

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II. Background

The Centers for Disease Control's (CDC) Division of Reproductive Health has provided logistics management technical assistance to Nigeria's family planning programs since 1983. John Snow, Inc.'s (JSI) Family Planning Logistics Management (FPLM) project joined CDC in this effort in 1987.

Prior to and during the early years of the Family Health Services (FHS) project, CDC/JSI technical assistance efforts focused primarily on the areas of family planning program design and development, MIS development, logistics management training for state program staff, on-going assessment of contraceptive commodity status, and the forecasting of future contraceptive requirements.

Assistance continues in all these areas but recent CDC/JSI consultations have in addition emphasized planning for the transition to the next phase (FHS II) of USAID assistance to Nigeria's family planning with particular reference to the implications of:

Federal Ministry of Health (FMOH) operation of the public sector contraceptive logistics system, beginning in late 1992;

the conclusion of Sterling Pharmaceutical's free warehousing and delivery services for public sector contraceptives as of no later than, reportedly, December 31, 1992;

the conclusion of FPIA's contract in support of the FHS project as of February 28, 1993, and Pathfinder International's current contract as of end April, 1993, and;

revision of the FHS project organizational structure during its second phase (beginning January 1, 1994).

III. Trip Objectives

FPLM Logistics Advisor Brice Atkinson and Training Advisor Maureen Comfort visited Nigeria July 23 - August 14, 1992.

Their scope of work included:

review of the current status of public sector contraceptives, and if necessary, the development of

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recommendations for shipment of additional quantities; development of recommendations for revision of the FHS project organization, and a transition plan incorporating those recommendations, which will ensure the continued provision of effective logistics management assistance to the public sector contraceptive logistics system -

during the shift to FMOH operation of the system,

during the period between now and the end of the current FPIA and Pathfinder International contracts,

and under the FHS II project;

the development of plans for short and long-term logistics management training in Nigeria for FMOH, zonal, state, and Local Government Area (LGA) public sector contraceptive logistics system staff;

identification of logistics management assistance, in addition to training, which the FHS project might provide to FMOH, zonal, state, and LGA staff which would contribute to the efficiency and effectiveness of the public sector contraceptive logistics system;

development of a first draft of the contraceptive logistics section of the FHS II project paper;

and confirmation of arrangements for the Nigerian participants in the logistics management training course scheduled for September 14 - 18, 1992 at JSI's FPLM project headquarters.

IV. Activities

Trip activities centered on review and analysis of the "Report .. Contraceptive Logistics System for the Public Sector" dated June 22, 1992. The report was prepared for the Federal Ministry of Health and Human Services by World Bank Consultants Dr. Dharam R. Gupta and Dr. Fred B. Adenika and constitutes the Ministry's plan for the design, implementation, and operation of the public sector contraceptive logistics system (Appendix 2 is a copy of the report).

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Following its internal review and acceptance by the Ministry, the report was provided to FHS project staff and to the consultants on July 29.

A series of meetings were subsequently held with FHS project and FMOH staff to discuss how the FHS project might most effectively support the Ministry's implementation and operation of the logistics system, particularly through the provision of logistics management training and other types of technical assistance (Appendix 3 reflects the FHS project's position on the general elements of the Ministry's plan).

A unit development workshop was conducted to design a FHS project Contraceptive Logistics Management Unit, and to identify the new unit's objectives and personnel requirements.

Discussions were held with consultant John Lundgren who is overseeing the production of the Project Paper for FHS II. The consultants also participated in the Nigerian Situation Analysis Dissemination Seminar conducted by the Population Council in collaboration with the FMOH.

The current status of public sector contraceptives was assessed. Recommendations for additional quantities required for shipment to ensure adequate stocks on hand when the FMOH begins operations of the system were provided to the FPIA Project Administrator.

A summary Logistics Management Training Plan was drafted based on the findings and recommendations of this report. It was submitted to the FHS Project Administrator for review and possible submission for consideration by FMOH/PHC.

The consultants also facilitated preliminary arrangements for FHS project staff Ifeanyi Ibe and Bright Ekweremadu, and FMOH Planning Officer and Commodities/Logistics Coordinator, Lawrence Anyanwu, to attend JSI's September logistics management training class.

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V. Findings and Recommendations

A. World Bank Consultants' Report on the Contraceptive Logistics System for the Public Sector in Nigeria

Copies of the World Bank Consultant's report, which has recently been accepted and approved by the FMOH, were provided to FHS project staff and to the FPLM advisors July 29.

The report is the FMOH's blueprint for implementation of its operation of the public sector contraceptive logistics system. Dr. Fred B. Adenika, one of the report's authors, has been contracted by the FMOH to assist the Ministry implement the new system.

While there are differences of opinion between the FPLM advisors and the World Bank consultants on certain details of the design and implementation plan, there is overall agreement that the design is well conceived and the implementation plan practical.

The Ministry has announced that the original start-up date of October 1 for the new system has been revised to December 1, 1992. Dr. Adenika has indicated that the plan will be implemented in several phases with the first phase covering the period between approximately August 1 and December 1. For planning purposes, sub-phases during this first phase will be measured in months. The emphasis will be on resource identification and practical implementation.

More detailed comments on various aspects of the system design and implementation plan are provided in following sections of this report.

B. FHS Contraceptive Logistics Management Unit

1. Unit Development Workshop

A Unit Development Workshop was conducted by the FPLM consultants with the goals of:

defining the purpose of FHS's proposed new Contraceptive Logistics Management Unit;

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developing an initial transition plan and time table for systematic transfer to the new unit, or to the FMOH, of responsibility for the public sector contraceptive logistics systems functions now performed by FPIA and Pathfinder.

Workshop participants included FHS Project Administrator John McWilliam, FPIA Project Director Uche Azie, FPIA Program Officer Bright Ekweremadu, Pathfinder Country Representative Mike Egboh, and FPLM consultant Cliff Olson.

2. FPIA/Pathfinder Logistic Systems Functions

The participants identified the following public and private sector contraceptive logistics systems functions currently performed by FPIA and Pathfinder:

FPIA

- forecast national public and private sector annual contraceptive requirements, and provide these requirements to AID/W through FPIA/NY;
- receive at its New Windsor, MD, warehouse contraceptive supplies ordered by FPIA/NY and procured by AID/W;
- ship public and private sector contraceptives to Nigeria;
- oversee the agreement with Sterling for the receipt and storage at its Territorial warehouses and depots of public sector contraceptives;
- arrange clearance of contraceptive shipments;
- arrange delivery from Sterling/Lagos to state warehouses, and occasionally to Sterling depots;
- in response to Pathfinder provided information, arrange with Sterling for the periodic delivery of public sector contraceptives to the appropriate locations;
- arrange deliveries of private sector contraceptives to private sector organizations, institutions, and projects;
- monitor usage of USAID supplied private sector contraceptive;

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- provide contraceptive logistics technical assistance to private sector organizations (including knowledge and technology transfer);
- liaise with other units within the FHS project;
- the performance of tasks assigned by the A.A.O. or by the Project Administrator.

Pathfinder

- design, administration and provision of logistics management training to family planning program managers;
- monitor state level public sector contraceptive distribution and spot check distribution at lower levels;
- transmit distribution information and state level requirements to FPIA;
- oversee renovation of central and zonal warehouses;
- with the assistance of Management Sciences for Health (MSH), develop, maintain, and operate the NICARE Management Information System, and plan and accomplish the integration of NICARE and INVEC;
- develop and support the operation of the manual MIS systems (including the design of records and report forms);
- provide logistics management TA to the FMOH, and transfer to the FMOH, systems and skills in this area;
- liaise with other units within the FHS project;
- perform tasks assigned by the A.A.O. or by the Project Administrator.

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**3. Proposed FHS Contraceptive Logistics Management
Unit Functions**

Workshop participants tentatively identified which of the above functions should be transferred in the future to the new unit or to the Ministry in the long term, taking into account:

- the shift to Federal operation of the public sector logistics system in late 1992;
- the end of the current FPIA and Pathfinder contracts in February and April, 1993;
- the end of free storage and delivery of public sector contraceptives by Sterling, reportedly, as of October 31, 1992;
- the probable organization, structure, and objectives of the FHS II project.

The results of the above discussion are shown in summary form below - by broad functional categories - rather than by itemized single functions (the discussion was limited to the public sector as a private sector review and assessment by the SEATS project is already in process).

Forecasting

The new Federal system envisions an annual forecasting consultative exercise involving meetings first at the service delivery point level, followed by LGA, state, zonal, and national forecasting meetings (see Appendix 2, pages 17 and 18).

The participants noted that USAID also has a forecasting process, mandated in part by AID/W instructions, which includes the development of a national forecast through the application of a variety of methodologies, and which is finally expressed in the form of Contraceptive Procurement Tables (CPT's).

To date, the forecasts of requirements for USAID contraceptives and the CPT's have been accomplished by CDC and FPLM consultants, and by FPIA, in coordination with FMOH and state program staffs. The departure of FPIA in February, 1993 means that the FHS logistics unit will carry direct responsibility for developing annual national forecasts in collaboration with the FMOH.

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Workshop participants view the future forecasts as involving even higher levels of collaboration than in the past between FHS logistics staff, FHS consultants, and FMOH central and zonal officers, and family planning staff at the state, LGA, and SDP levels.

From the FHS logistics unit side, this collaboration can take the form of:

- technical assistance in forecasting methodologies;
- provision and coordination of outside technical assistance;
- assistance in validation of forecasts;
- cooperation and coordination with other donor agencies;
- preparation of CPT's.

It was noted that a CDC/FPLM technical assistance visit is provisionally scheduled for September 26 - October 20, and that this visit will be an opportunity for further development of the collaborative forecasting process.

Monitoring (including data collection)

In the new Federal system, monitoring will be accomplished under the authority of an Assistant Director (Logistics) and through the activities of a Logistics Management and Monitoring Coordinator (LMMC), and an Assistant LMMC (all at the central level), working with Logistics Management and Monitoring Officers (LMMO's) and Assistant LMMO's in each zone.

In the past, this function has been performed primarily by two Pathfinder Contraceptive Logistics Officers (CLO's).

Monitoring includes:

- on-going review and assessment of the overall operations of the logistics system;
- determination of the adequacy of stock at all levels, and action to prevent and remedy shortages.

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- data collection in support of the above two objectives, and for use in forecasting short and long-term requirements.

As with forecasting, monitoring is an area where collaboration between FHS logistics unit staff and FMOH monitoring staff can contribute to the efficiency of the logistics system. Care must be taken, however, that monitoring staff from both organizations coordinate their efforts so as to not undermine the authority of the Federal officers, while achieving their common objectives of collecting distribution data and ensuring effective operation of the system.

The FHS logistics unit can also organize the provision of technical assistance to the FMOH in the areas of quality assurance and testing.

Procurement

For the life of the FHS project to date, FPIA has been responsible for the procurement of contraceptives. This responsibility has included determining requirements (forecasting) and completion of CPT's, ordering required supplies from AID/W, receiving supplies from manufacturers at its U.S. warehouse, shipping to Nigeria, and clearing shipments when they reach the port of Lagos.

The FHS logistics unit will have procurement responsibility when FPIA departs. The future procurement process will be:

- completion of CPT's (based upon FHS/FMOH collaborative forecast);
- through the A.A.O., ordering supplies from AID/W;
- receipt and processing of shipment documentation;
- receipt and clearance of shipments at the port of Lagos and movement of supplies, when cleared, to the FMOH's central warehouse.

Clearance of shipments through the port continues to be a time consuming process. Delays in the past have result in high demurrage charges, and have required considerable staff time.

Recommendation 1: The A.A.O. and Project Administrator should explore with AID/W (R&D/POP/CPSD), the possibility of having

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clearance through the port of Lagos included as part of the new shipping contract for shipment of USAID contraceptives to Nigeria.

In many countries receiving USAID contraceptive supplies, shipments are cleared under a "blanket" duty-free clearance. This is not the case in Nigeria and a new application must be made for the duty-free entry and clearance of each shipment. This process is laborious and requires considerable staff time.

Recommendation 2: USAID should apply for duty-free entry and clearance of all USAID contraceptive shipments.

Warehousing

The FHS project is assisting the FMOH by refurbishing the Ministry central warehouse at Oshodi, in Lagos, and the four zonal warehouses at Enugu, Ibadan, Kaduna, and Bauchi.

In this area the logistics unit can provide technical assistance to the FMOH in good storage practices and stock management.

Management Information Systems

The FHS project has assisted the FMOH with the development of two software programs, NICARE and INVEC, which respectively record family planning (and other) service statistics, and contraceptive inventory data. The FHS project is working on integrating the two systems to make them even more useful.

Technical assistance in this area will continue to be provided by the FHS project as well continued assistance to the FMOH in developing and improving the manual MIS system (see FPLM consultant Cliff Olson's June and August trip reports). All concerned agree that the manual MIS must be developed and in effective operation before reliance is shifted to a computerized system.

Training

Training will be a high priority of the logistics unit. Given its importance and complexity, training is dealt with in detail in Section D.

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4. FHS Contraceptive Logistics Management Unit Staff Requirements

Limited time prevented workshop participants from assessing staff requirements for the new unit. Near the end of the workshop a final effort was made to quickly estimate the percentages of unit time which might be required for the accomplishment of major functions, and the numbers of persons required under each functional category.

It is emphasized that this was a last minute effort and that these issues require further and more careful study.

Function	% Time	Staff
Unit management, liaison with FMOH and other agencies, and FHS units	(on-going)	1
MIS design and operations	40	2
Training	20	1
Forecasting	10	0.5
Logistics Monitoring	30	4
Procurement	10	0.1

110%*

*(Figure left in excess of 100% to emphasize need for further review of this issue.)

5. Transition Plan - Priorities

Limited time prevented the development of a comprehensive transition time table covering the many changes affecting the operations of the public sector logistics system, and the timing of the transfer of functions to the proposed FHS Contraceptive Logistics Management Unit.

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However, in the process of identifying the functions performed by the organizations now involved in the operation of the system, certain areas requiring priority attention emerged. These priorities are covered in the following recommendation.

Recommendation 3: A Contraceptive Logistics Management Unit should be formally established within the FHS project as soon as possible, and staffed with at least two people. Unit priorities should be:

- continued development of the transition plan, particularly, a time table for transfer to the new unit of the functions identified at the unit development workshop (see Section V., B. for details of workshop and functions identified;
- the convening of at least bi-weekly meetings of the workshop participants, to assist with the accomplishment of the above objective (it is suggested this group be renamed the Transition Task Force);
- periodic meetings with FMOH staff charged with implementing the new Federal system, and, in particular, with Dr. Fred B. Adenika, the consultant employed by the FMOH to assist it in this task - particular attention should be paid to the development of collaborative procedures and policies in the areas of forecasting, and monitoring, and to specific events or activities in the near future requiring joint action - such as the shift of public sector contraceptives from the Sterling warehouse to the Ministry's Oshodi warehouse by October 31;
- monitoring the status of contraceptive supplies;
- the development of a unit table of organization including staff requirements and position descriptions.

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C. Status of Public Sector Contraceptive Supplies

FPIA records indicated the following public sector contraceptive stock balances at Sterling's central warehouse as of July 29, 1992 (the balances included quantities in the latest July shipment):

Contraceptive	Quantity	Estimated* Months of Supply
52mm Colored/No Logo Condoms	- 4,290,000 pieces	10.2
Lo-Femenal Oral Pill	- 673,200 cycles	4.9
Copper T380 IUD's	- 73,800 units	5.5
Conceptrol VFT's	- 955,200 tablets	7.1

In early August, FPIA headquarters advised the FHS project by facsimile message that the next shipment of public sector contraceptives would depart the United States approximately August 13, and would consist of:

Lo-Femenal Oral Pill	- 540,000 cycles	3.9
Copper T380 IUD's	- 60,000 units	4.5

*[Projected CY93 monthly consumption rates have been used in the preceding and following tables as there is mounting evidence that usage of USAID contraceptives is increasing due to promotional efforts in connection with the family planning logo launch, PPFN public service messages promoting family planning, economic pressures, the indirect effects of anti-AIDS publicity, and shortages of injectable contraceptives.]

FPIA/New York also advised that "Other items are ordered from AID/Washington and will be shipped at a later time. ... The public sector will have ample supplies to turn over to the FMOH as planned."

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1. Adequacy of Current Supplies

Assuming there are no delays in shipping and that the shipment is cleared promptly from Lagos port, the August shipment could be in the Lagos central warehouse within approximately five to six weeks of August 13, that is, by approximately September 17 or 24.

Given the estimated quantities of all types of contraceptives at the clinic and state levels (see Atkinson/Olson report, May 23 - June 11, 1992), and stocks now on hand at Sterling's central warehouse, it appears that the August shipment will be sufficient to prevent wide spread state or clinic level stockouts of USAID supplied contraceptives in October and November - provided that no states are over-supplied, and that there is minimal mal-distribution of supplies within states.

The following table reflects central warehouse public sector contraceptive stocks on hand as of July 29, plus the anticipated August 13, shipment minus anticipated consumption in August and September (all stated in months of supply) in order to arrive at a projection of months of supply on hand as of October 1, 1992.

Contraceptive	7/29/92 Balance	August Shipment	Aug/Sept Consumption	Projected Balance
Condoms	10.2 plus	nil minus	2 =	8.2 months
Lo-Femenal	4.9 "	3.9 "	" =	6.8 "
Copper T380	5.5 "	4.5 "	" =	8.0 "
Conceptrol	7.1 "	nil "	" =	5.1 "

It is emphasized that the above table reflects only current and projected central warehouse balances and that there are additional stocks at the state and clinic levels. It should be noted also that issues in August and September from the central warehouse may exceed or be less than the projected average national consumption of contraceptives and that accordingly the projected October 1 balances may well be lower or higher.

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**2. Projected Status of Contraceptive Supplies on
December 1, 1992**

The preceding table suggests that additional shipments will be required, following the planned August shipment, if projected quantities are not to fall short of both our and the World Bank consultants' estimates of the amounts which should be on hand when the FMOH assumes direct responsibility for operation of the public sector contraceptive logistics system on the revised target date of December 1, 1992.

The WB consultants recommended originally that 15 months of supply be on hand at the central warehouse as of the original target date of October 1, reasoning that it would be desirable to have, as of that date, supplies covering projected consumption in October, November, December and 12 months (maximum) reserve stocks on hand as of January 1, 1993.

We believe that it would be desirable to have "start-up" stocks at the central warehouse on January 1, equal to 9 months projected CY93 consumption. It would also be desirable to have additional stocks arrive, beyond those needed to establish central level reserves, to provide 3 months start-up stocks at the new zonal warehouses, and to bring state warehouse reserves up to the 3 month level.

It should be noted that we are intentionally using the term "start-up" stocks to:

- emphasize the need to have adequate reserve stocks on hand to fill the new longer pipeline within Nigeria, and to assist the FHS project and the FMOH compensate for the inevitable problems which accompany the establishment of a new system;
- and to distinguish the suggested quantities from the levels of maximum reserves which will be maintained at each level of the Federal system when the system is fully operational.

We believe the levels of reserve recommended by the WB consultants may be more than required. This issue should be given priority attention when the AID/CDC/FPLM contraceptive supply TA team conducts its projected visit in late September to work with the FMOH staff to develop the CY93 forecast and to complete the CY93 CPT's.

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FPIA has indicated that other contraceptives are on order and will be shipped but has not specified their types or quantities, when they are expected to arrive at FPIA's warehouse, whether there are any reserve stocks in the warehouse, what quantities are planned for the next shipment or when the next shipment is planned.

The assurance that ample supplies will be on hand for turnover cannot be evaluated without at least specific information as to shipment quantities and arrival times. The quantities shipped must be sufficient to not only bring central warehouse stocks to the desired reserve levels, but to fill the zonal segment of the pipeline under the new Federal system.

Additional information is also required to ensure that adequate stocks are in the pipeline from the United States to maintain continuity of supplies when FPIA ceases operations in Nigeria and the FHS project becomes directly responsible for contraceptive supplies procurement.

Recommendation 4: The FHS project should cable R&D/POP/CPSD requesting that the project be informed, as quickly as possible, as to:

- what public sector contraceptive stocks are currently on hand in FPIA's United States warehouse;
- what public sector contraceptive stocks are on order;
- what quantities of public sector stocks are planned for shipment (following the August shipment);
- the intended date or dates of the next shipments.

Recommendation 5: The FHS project should cable R&D/POP/CPSD requesting an AID/CDC/FPLM TA team visit in September/October, 1992 for the purposes of assisting the FMOH and FHS staff forecast CY93 contraceptive requirements and complete CY93 CPT's, and in planning for Federal operation of the public sector logistics system, and the FHS II project. The possibility of having Tim Rosche, Lome based FPLM Regional Logistics Advisor for West Africa, included in the team for this visit should be explored with FPLM and R&D/POP/CPSD.

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D. Training

1. FHS Project Training Accomplishments and Resources

The FHS project has a strong public sector training component. Areas of emphasis have included:

training of family planning trainers;

management and supervision training;

MIS training, and;

curriculum development for in-service and pre-service training of:

clinical service providers,
Community Health Extension Workers (CHEW's),
and Village Health Workers (VHW's).

The project has established an exemplary system for institutionalizing training capacity through the development of a network of Nigerian trainers and consultants in family planning and primary health care (known as The Network or the Training Network).

Two groups of family planning trainers and consultants have participated in an intensive series of skill building workshops and practicums, and approximately sixty management development-oriented Network members have been trained in training techniques, consultation skills, supervisory and management techniques, and curriculum and materials development.

Approximately twenty-four Clinical Service Resource Trainers have been similarly trained as trainers of trainers and technical assistants/consultants in family planning service provision training (see Appendix 5 for information concerning each Network group).

The FHS project currently uses these trainers for its own project-funded management, supervision, and clinical training, and serves as a clearinghouse for utilization of the trainers' services by other agencies.

It is envisioned that by the end of FHS I, these Network members will be organized into an entity, independent of the project,

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which will provide consulting services in collaboration with a local institution such as a university.

Some commodity management training for state level personnel was provided under the FHS project in 1989 and 1990 but it is not known how many of those trained at that time remain on the job. Logistics management training was not done above the state level, as the FHS Project/Private Sector in a coordinated effort with Sterling Pharmaceuticals, Limited, procured and distributed contraceptives to the states. Federal staff were not directly involved in the operations of the logistics system.

Training related to commodity management for lower level staff (i.e., LGA's and clinics) is limited. Curricula for LGA Management Training and for Clinical Service Provider Training contain short sections on record keeping and storage practices. MIS Training also covers record keeping and reporting of logistics data.

**2. FMOH Public Sector Contraceptive Logistic System
Training Needs**

(a) Strategy

As noted above, the FMOH is currently implementing a new public sector contraceptive commodities distribution system at the central and zonal levels, and is for the first time assuming operational responsibility for such a system. New personnel are being recruited to occupy newly created Logistics Management and Monitoring Officer and Storekeeper positions at central and zonal levels, and existing central level staff are being assigned logistics responsibilities.

Recommendation 6: To ensure a successful start for the system and its continued effective and efficient functioning, newly assigned personnel should be trained in both general logistics concepts and in the specific procedures of the new system.

Logistics management training is also recommended for personnel at other levels of the system. The plan for the new system calls not only for Federal administration of the central and zonal levels but also for changes to the state to LGA to service delivery point (SDP) sections of the existing distribution system.

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Implementation of a Maximum-Minimum Inventory Control System at all levels of the pipeline is envisioned, as well as the adoption of a consultative forecasting process in which personnel from the clinic level up meet annually in working groups to estimate contraceptive needs. The successful implementation of both of these procedures will depend heavily on the competent performance of personnel at all levels of the system. This can only be ensured through focussed training of staff at each level.

Effective training in forecasting and implementation of a max-min system will require the development and/or refinement of policies on stock levels and requisitioning mechanisms and of system-wide guidelines for calculating commodity requirements. Currently, training curricula offer instruction on completing the Contraceptive Receipt/Requisition Form (Form 4A), but state that "normally your state, zonal or LGA office will send you supplies estimated on the basis of your reported distribution, and you should not have to order contraceptives", unless reserves fall below a three month supply. The instructions on the form itself make the same statement.

However, there do not appear to be any guidelines for determining issue quantities. And at the state level, reorder quantities are determined not by SMOH staff but by FHS project Contraceptive Logistics Officers during their quarterly visits to state warehouses.

Similarly, existing guidelines for commodity needs estimation are inadequate. The FMOH/PHC "Guide to Family Planning Practice in Nigeria" contains an appendix on forecasting commodities needs, but in fact only provides instructions for completing Form 4A. Another appendix entitled "How to estimate commodity needs for your clinic" presents a work sheet outline for determining contraceptive requirements based on service statistics and/or targets.

Recommendation 7: Standard methodologies should be developed for determining routine reorder quantities and for estimating longer term commodity needs.

This will ensure that facilities at all levels are systematically calculating their supply needs to avoid stockouts and oversupply. These should be developed by a joint team from FHS and the FMOH/PHC. These methodologies can then be incorporated into proposed commodity management training curricula.

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The World Bank report proposes in-country training for three different groups of personnel in general principles of logistics management, forecasting, supervision and monitoring, computerized MIS (proposed as the NICARE and INVEC systems), quality assurance, and an optional cost recovery scheme. In addition, overseas observation trips to advanced family planning programs are recommended for the Assistant Director (Logistics) and the Logistics Management and Monitoring Coordinator.

Recommendation 8: We agree in principle with the groups to be trained and with the basic subject matter, but recommend modest revisions in the composition of the groups to be trained together.

These recommendations are summarized in the following matrix, which also elaborates on the curriculum recommended for each group.

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Logistics Management Curricula Recommendations		
Personnel	Curriculum	# of days
National and Zonal Level: Logistics Management and Monitoring Officers (LMMOs), Assistant LMMOs, and Storekeepers	<ul style="list-style-type: none"> - Max-Min Inventory Control - Max-Min in the FMOH System - LMIS (manual) - Record keeping and Reporting in the FMOH system - Assessing Supply Status - Logistics Systems Assessment - Logistics Supervision - Contraceptive Storage - Quality Assurance - Forecasting - NICARE and INVEC systems 	<p>5 days of logistics management</p> <p>1-2 days of forecasting</p> <p>3-5 days on NICARE and INVEC, and general computing</p>
State Family Planning Coordinators (SFPCs), Assistant SFPCs, and Storekeepers	<ul style="list-style-type: none"> - Max-Min Inventory Control in the FMOH and state system - LMIS (manual) - Record keeping and Reporting in the FMOH and state system - Assessing Supply Status - Logistics Systems Assessment - Logistics Supervision - Contraceptive Storage - Quality Assurance - Forecasting State Commodity Needs - Using NICARE and INVEC System Data 	<p>5 days of logistics management and forecasting</p> <p>2-3 days in NICARE and INVEC (not to include operation of systems)</p>
Local Government Area Family Planning Coordinators and Storekeepers	<ul style="list-style-type: none"> - Procedures for Max-Min Inventory Control - Record keeping and Reporting Procedures - Assessing Supply Status - Logistics Supervision - Contraceptive Storage - Quality Assurance - Guidelines for Forecasting LGA Commodity Needs - Using NICARE and INVEC System Data 	<p>2-3 days of logistics management and forecasting</p> <p>1 day on NICARE and INVEC (not operation)</p>
Service Delivery Point Personnel	<ul style="list-style-type: none"> - Procedures for Max-Min Inventory Control - Record keeping and Reporting Procedures - Assessing Supply Status - Contraceptive Storage (including Quality Assurance) - Guidelines for Estimating Commodity needs 	<p>2-3 days total</p>

The above matrix proposes that warehouse and monitoring personnel at each level be trained together. These categories of personnel must work together in a variety of activities, and their collaboration will be fostered through joint training. Also, their training needs are substantially similar.

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It is important to note that not all of the above listed subjects may be covered in a single training. For example, we entirely agree with World Bank consultants, Dr. Gupta's and Dr. Adenika's opinion that computerization of the MIS should occur only after a manual system is fully functioning, and that accordingly training on the NICARE and INVEC system should be conducted at the time they are implemented, and not before.

It is unrealistic to assume that all personnel should be trained immediately. First, priority need is obviously at the central and zonal levels, where new personnel are being placed and new structures and procedures being set up. State and lower level staff have been carrying out logistics responsibilities within an existing structure which remains structurally similar to before despite modifications. Training of these personnel, while important, is not as urgent. Time should be taken to properly develop materials appropriate to the problems faced in lower levels and, just as important, to allow for adjustments based on modifications and improvements to the system's new structure and procedures. Otherwise, the information imparted in the training runs the risk either of being so general as to be useless in practice or of quickly becoming outdated or even incorrect as the system evolves.

Recommendation 9: Training of lower level personnel should be completed in phases according to priority need. These priorities should be determined in consultations between FMOH/PHC and FHS staff.

One option would be to train all state level staff before training LGA staff. Another would be to train all levels of personnel in a given geographical area at the same time (e.g., state by state, or zone by zone, etc.). In any case, this effort will mean training upwards of 650 people. Depending on the level of effort involved, it is estimated that this could take from one to three years to complete. If refresher training is provided, additional time will of course be required.

Although recommended by the World Bank consultants, we have not included the subject of cost recovery in our training scheme. We agree that training in options for cost recovery should be provided but believe that this subject would be more effectively and appropriately covered in general management training.

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(b) Implementation

Recommendation 10: Initial training of central and zonal level personnel can be developed and funded by FPLM. We recommend that the training team consist of a FPLM trainer, a member of the FHS project training staff (or a Training Network consultant) and a FPLM/CDC logistics advisor serving as a technical resource.

The training could be conducted as early as October 1992; timing, however, is entirely dependent on selection and placement of FMOH staff to fill these positions. A needs assessment questionnaire for this training has been developed and should be distributed to and completed by probable participants as soon as possible.

Recommendation 11: Training of state, LGA, and possibly SDP personnel, and any refresher training of central and zonal staff, should be conducted using already existing in-country resources of the public sector Training Network. Such training should be conducted only after follow-up evaluation of the initial training done for central and zonal level personnel and assessment of the functioning of the new distribution system.

As noted above, the Network has a number of competent trainers equipped to conduct such training. Some in fact participated as trainers in the commodities management workshops held in 1989 and 1990.

We propose that FPLM hold a logistics management training and a curriculum development workshop for those trainers interested and available to do family planning logistics management training in the future. The logistics management training would provide these trainers with an adequate technical background for the curriculum development workshop. There they will adapt existing logistics management materials into a "generic" curriculum for at least the state level, which could later be adapted for particular workshops. Time permitting, curricula for other levels could be provisionally outlined.

The logistics training and curriculum development workshop would each require one week; optimally the two would be held back to back, for a two week total. Criteria for trainer participation should include confirmed availability to do 4 - 8 workshops over the next year.

By carrying out training through the existing Training Network, logistics management training expertise is quickly institutionalized. Further, it becomes self-sustaining as the

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Network trains new or replacement trainers to carry out logistics training. There is the added opportunity of coordination and integration of updated commodity management modules within the management, supervision, MIS and clinical training currently being conducted for FHS by Network trainers.

As Network trainers also serve as consultants for other health organizations, the door is open for collaborative training with other health sectors, as was recommended in the World Bank report.

A Logistics Management Training and Curriculum Development Workshop for Network trainers could be held as early as February of 1993. The timing should be determined in consultation with FHS and PHC staff, but enough time should be allowed between the fall training of central and zonal personnel and these workshops to allow an evaluation of the effectiveness of the first training and an assessment of the initial functioning of the distribution system at the federal level.

A needs assessment of the state and, if possible, lower levels should also be conducted in this interval. This will ensure that the curriculum responds to the specific issues arising from implementation of the new system as well as adequately addressing the concerns of both federal and state personnel.

Recommendation 12: Individual needs assessments should be accomplished prior to each logistics management training in order to ensure that the specific logistics problems of each group are addressed.

We recommend that a Network trainer work with a member of the FHS commodities unit and with an FMOH staff member, if available, in conducting the needs assessment for each training.

A primary function of each needs assessment should be the selection of appropriate candidates for training based upon a review of which staff are actually responsible for commodity management. The review should include assessment of participants' backgrounds in logistics and their commodities management concerns, as well as clarification of the details of each state's (or LGA's) distribution system (e.g., maximum and minimum levels, whether additional levels such as state zones are present, etc.), and assessment of its functioning.

All of this information should then be used to adapt the "generic" logistics management training modules into an

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appropriate and responsive workshop curriculum for that group.

Recommendation 13: Follow-up evaluations should be conducted for all workshops. FPLM/CDC advisors should participate in at least one of these follow-up visits in 1993.

The follow-up team should be of a similar composition to the needs assessment team, i.e., a Network trainer, an FHS commodities unit staff person, and an FMOH representative, when available. These follow-up visits should serve as an opportunity not only to evaluate the effectiveness of the training workshops but also to provide immediate technical assistance if problems are noted. An FPLM/CDC advisor or advisors should accompany one or more of the first follow-up team visits.

Information gathered during the follow-up evaluation should be used to revise and improve the "generic" logistics management curriculum (or curricula).

**3. FHS Contraceptive Logistics Management Unit
Training Needs**

Two FHS staff members working in commodities management have been nominated for logistics management training, Dr. Ifeanyi Ibe and Mr. Bright Ekweremadu. They will attend FPLM's Logistics Advisors Training, to be held in September in Arlington, VA. We agree that this course will be particularly useful for these staff given the advisory role that FHS is moving into with regards to the FMOH contraceptive supply system.

Any further logistics management training needs of FHS staff should be assessed in six to nine months time, after the unit's role vis-a-vis the FMOH system is clarified and more specific needs can be defined.

APPENDIX 1

Persons and Organizations Contacted

A.I.D. Affairs Office

Mr. Eugene Chiavaroli, A.I.D. Affairs Officer (A.A.O.)

REDSO/WCA (Regional Economic Development Services Office, West and Central Africa)

Ms. Katherine Jones-Patron, Health and Human Resources
Ms. Nancy Nolan, Population

Family Health Services (FHS) Project

Dr. John McWilliam, Project Administrator
Dr. Ifeanyi Ibe, Commodity/Logistics Coordinator
Mr. Michael Egboh, Country Representative, Pathfinder
Dr. Uche Azie, Family Planning International Assistance (FPIA),
Project Director
Mr. Emmanuel Okochi, Program Officer, Pathfinder
Mr. Bright G.E. Ekweremadu, Program Officer, FPIA
Mr. Tunde Adesipo, Commodities Logistics Officer (CLO),
Pathfinder
Mr. Rasheed Iginla, CLO, Pathfinder

Federal Ministry of Health

Dr. Patrick Okungbowa, Deputy Director, Primary Health Care
Mr. Lawrence C.C. Anyanwu, Planning Officer
Dr. Martins O. Ogundeji, Zonal Coordinator, Primary Health Care,
Ibadan (Zone B)
Dr. (Mrs.) Gbadamosi,

Population Services International (PSI)

Mr. Michael Quist, Country Director

Johns Hopkins, Population Communication Services (PCS) Project

Susan Krenn, Director (Lagos)

Peter Wehmann, Senior Associate, Saffitz, Alpert & Associates, Inc.
(SAAI)

APPENDIX 2

Report

Contraceptive Logistics System

For The Public Sector
in Nigeria

Prepared For

The Federal Ministry
of Health and Human Services

By

Dharam R. Gupta & Fred B. Adenika

Lagos, June 22, 1992

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ACRONYMS

AIDS	- Acquired Immune Deficiency Syndrome
CCCD	- Combatting Childhood Communicable Diseases
CDD	- Communicable Diarrhoeal Disease
CLO	- Commodity Logistics Officer
CMS	- Central Medical Stores
CPR	- Contraceptive Prevalence Rate
CYP	- Couple Years of Protection
EDP	- Essential Drugs Programme
EPI	- Expanded Programme of Immunization
FDAC	- Federal Drugs Administration and Control
FEFO	- First Expire First Out
FHI	- Federal Health Institutions
FHS	- Family Health Services Project (USAID)
FIFO	- First In First Out
FMOH	- Federal Ministry of Health
FMOHHS	- Federal Ministry of Health and Human Services
FP	- Family Planning
FPIA	- Family Planning International Assistance
IEC	- Information Education Communication
IUCD	- Intrauterine Contraceptive Device
IUD	- Intrauterine Device
LGA	- Local Government Area
LMMC	- Logistics Management and Monitoring Coordinator
LMMO	- Logistics Management and Monitoring Officer
MAX	- Maximum
MCH	- Maternal and Child Health
MIN	- Minimum
MIS	- Management Information System
MISO	- Management Information System Officer
MWRA	- Married Women of Reproductive Age
NACP	- National Aids Control Programme

NEDP	- National Essential Drugs Programme
NGO	- Non-Governmental Organisation
NPP	- National Population Programme
ORT	- Oral Rehydration Therapy
PHC	- Primary Health Care
PC	- Personal Computer
IPPF	- International Planned Parenthood Federation
PPFN	- Planned Parenthood Federation of Nigeria
QA	- Quality Assurance
SDPs	- Service Delivery Points
SFPC	- State Family Planning Coordinator
SPNL	- Sterling Products Nigeria PLC
TFR	- Total Fertility Rate
UNFPA	- United Nations Population Fund
UNICEF	- United Nations Children's Fund
USAID	- United States Agency for International Development
VHW	- Village Health Worker
VVHW	- Voluntary Village Health Worker
WB	- World Bank
WRA	- Women of Reproductive Age
ZLO	- Zonal Logistics Officer

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Our thanks also go to the officers of the Family Health Services Division, USAID, including Mr. John McWilliam, Project Administrator; Dr. Uche Azie, Associate Regional Director; FPIA Project; Dr. Ifeanyi Ibe, Commodity Logistics Officer, FHS, and Mr. Mike Egboh, Senior Programme Officer, Pathfinder International, for their assistance.

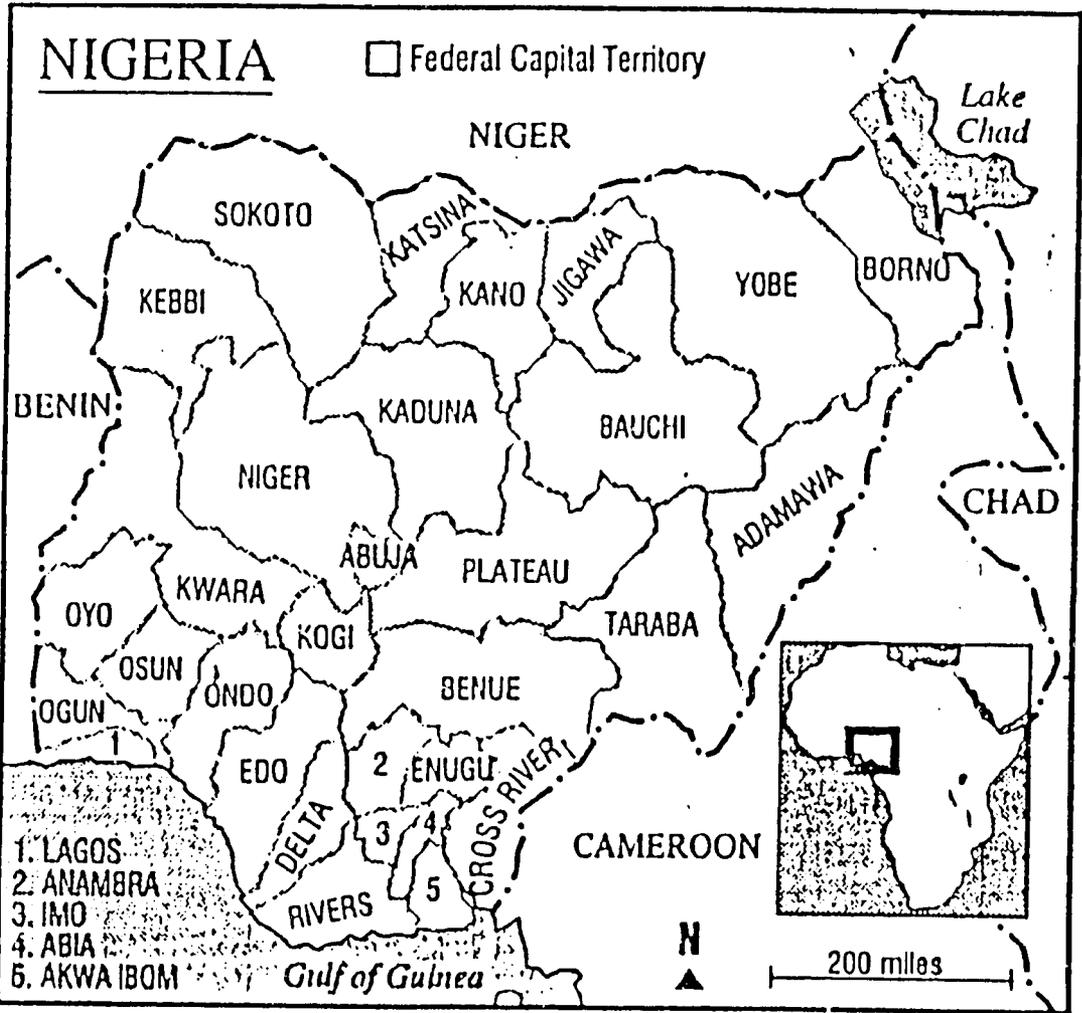
We are indebted to Dr. Esther Boohene, Senior Population Adviser, The World Bank; Dr. Fidelis Zamachi and Dr. Babs Sagoe, UNFPA; Dr. Valerian P. Kimati, UNICEF, Mr. Govind Agrawal, Regional Vice President, West Africa, Sterling Products (Nigeria) PLC, and all others contacted during the course of the consultancy without whose cooperation the prosecution of this assignment would have been difficult.

Finally, we are grateful to the Federal Ministry of Health and Human Services for putting at our disposal Mr. Lawrence Anyanwu, Planning Officer, who accompanied us on our field trips and greatly facilitated our contacts and work throughout the consultancy.

Akwa Ibom 2,359,736	Adamawa 2,124,049	Abia 2,297,978
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1991 Census Results

Anambra 2,767,903
Bauchi 4,294,413
Benue 2,780,398
Borno 2,596,589
Cross River 1,865,604
Delta 2,570,181
Edo 2,159,848
Enugu 3,161,295
Imo 2,485,499
Jigawa 2,829,929
Kaduna 3,969,252
Kano 5,632,040



- 1. LAGOS
- 2. ANAMBRA
- 3. IMO
- 4. ABIA
- 5. AKWA IBOM

Katsina 3,878,344	Kogi 2,099,046	Lagos 5,685,781	Ogun 2,338,570	Osun 2,203,016	Plateau 3,283,704	Sokoto 4,392,391	Yobe 1,411,481
Kebbi 2,062,226	Kwara 1,566,469	Niger 2,482,367	Ondo 3,884,485	Oyo 3,488,789	Rivers 3,983,857	Taraba 1,480,590	Abuja 378,671

1.

EXECUTIVE SUMMARY

1.1 Introduction

The report presents the design of a contraceptive distribution system for the public sector to be managed by FMOHHS with special emphasis on building and strengthening institutional capabilities.

A review of the existing logistics system has demonstrated a compelling need and clear justification for FMOHHS taking over the responsibility for distributing contraceptives in the public sector. Furthermore, our discussions with Programme Managers at all levels in the field have reinforced our confidence in the capability of FMOHHS/Zonal/State/LGA infrastructure to manage, after some strengthening of staff, equipment and training, the proposed logistics system competently and effectively.

1.2 Forecasting

Forecasts of future contraceptive requirements should be made through a series of "bottom-up" consultative exercises by Service Providers and Programme Managers at LGA, State, Zonal and National levels. Because of the involvement of field personnel at different levels, the requirements of contraceptives emerging from such a consultative process will reflect more correctly the actual demand for contraceptives in the field and will be, therefore, more realistic.

1.3 Procurement

Procurement of contraceptives should be made on the basis of the above forecasts. FMOHHS should arrange procurement through Donor Agencies to the extent possible and through International Competitive Bidding for the quantities not available from donors. The International Competitive Bidding procedure used by IDAC for procuring essential drugs under The World Bank assisted NEDP will be the best and most cost-effective method.

1.4 Distribution and Transport

- i. The pivot of the proposed distribution system should be the four Zonal Warehouses at Bauchi, Enugu, Ibadan and Kaduna which will be primarily responsible for distributing

contraceptives in their zones and ensuring their availability at SDPS/Health Facilities. They should be responsible also for supervision, inventory control, MIS, monitoring and evaluation for which additional staff, equipment and training have been recommended.

- ii. The Central Warehouse at Oshodi should be responsible for delivering contraceptives to Zonal Warehouses who in turn should deliver them to State Warehouses. The use of reliable private commercial transport companies is recommended as this will be the most cost effective way of making deliveries. SPNL are also using private transport companies for distributing their own products as well as contraceptives; they do not maintain their own fleet of vehicles for this purpose.
- iii. The distribution of contraceptives to LGAs/SDPs should follow the existing practice of collection by SDP/LGA supplemented by direct delivery when necessary.
- iv. Routine collection of contraceptives by LGAs directly from Zonal Warehouses is not practical because of distances and costs involved for the vast majority of LGAs. In fact, some states have created sub-zones within the State to facilitate collection of contraceptives by LGAs/SDPs.
- v. Zonal offices should monitor the stock situation and make direct supplies to LGAs in cases of emergency.
- vi. The proposed logistics system cannot be made functional until the Central Warehouse at Oshodi and the four Zonal Warehouses are fully refurbished and operational. For this reason it is of crucial importance to give immediate and urgent attention to this matter.

1.5 MIS and Computerisation

- i. It is proposed to use NICARE and INVEC software programmes for Contraceptive Management Information System and Inventory Control respectively. These two computer softwares have been specially developed for the Essential Drugs Programme and can also process information on contraceptives and family planning. The use of the same software, beside being cost effective, would also facilitate subsequent integration of FP and EDP data management.
- ii. Computerisation should follow and not precede the establishment of a reliable and functional manual system of data management. Provision for computers has been

made at Central and Zonal levels which should be extended later to State level.

- iii. To facilitate communication and quick transmission of data, provision has been made for FAX machines to be installed at Central and Zonal Headquarters. These equipment are now relatively inexpensive and are extremely useful for speedy communications to keep information up to date.

1.6 Monitoring and Evaluation

The existing M & E Unit of PHC Department is presently also responsible for monitoring and evaluation of FP programme. Any change in this arrangement is not desirable and could not be cost effective. This Unit should be supported continually with technical training in FP programme management.

1.7 Budget

The provisions for additional resources are as follows:

STAFF	NUMBER	ANNUAL COST (₹)
CENTRAL	4	53,300
ZONAL	12	124,800
		Sub-Total <u>178,100</u>
VEHICLES		
CENTRAL	1	330,000
ZONAL	8	2,640,000
STATES	17	6,060,000
		Sub-Total <u>9,030,000</u>
EQUIPMENT		
FAX	5	100,000
COMPUTER	5	350,000
		Sub-Total <u>450,000</u>
WAREHOUSE REFURBISHING		
CENTRAL		120,000
ZONAL		320,000
		Sub-Total <u>440,000</u>
PER DIEM/TRAVEL		
CENTRAL		300,000
ZONAL		800,000
		Sub-Total <u>1,100,000</u>
GRAND TOTAL		<u>11,198,100</u>

1.8 **Pre-requisites for starting the Proposed Public Sector Logistics System on October 1, 1992**

The following are the minimum essential steps which must be taken before starting the proposed Public Sector Contraceptive Logistics System:

- i. Central and Zonal Warehouses should be ready and functional.
- ii. Assistant Director (Logistics) and other proposed monitoring and management officers should be in position.
- iii. Oshodi CWH should have 15 months contraceptive stocks to cover requirements for October—December 1992 and full year 1993.
- iv. Zonal, State, LGA and SDP Warehouses/Stores should have contraceptive stocks to cover their October—December 1992 requirements plus the minimum stock level stipulated for each level.
- v. Reliable private commercial transporters should have been arranged by CWH Oshodi and by the four Zonal Warehouses for delivery of contraceptives to Zonal/State Warehouses.
- vi. The establishment of a reliable and functional manual system of data management and inventory control should have been arranged, to be followed later by computerisation.
- vii. Arrangements should have been made for the availability of vehicles/other equipment, and for the payment of travel costs/per diem of travelling staff through an Imprest Account.
- viii. Appropriate arrangements should have been made for staff training and refresher courses.

A time schedule of activities to be carried out before commencing operations by October 1, 1992 is given in Appendix 1.

A Critical Path Schematic is given in Appendix 2.

RECOMMENDATIONS

Forecasting and Procurement

- i. Forecasting of future contraceptive needs should be made through a bottom-up process of consultative exercise involving every level of the distribution chain from Service Providers up to LGAs, States, Zonal and National levels.
- ii. Contraceptives which are not supplied by donor agencies and which, therefore, have to be purchased on government account should be procured through international competitive bidding (ICB) as is being done for drugs under The World Bank assisted Essential Drugs Programme.

Distribution and Warehousing

- iii. Zonal Headquarters should be the focal points of the contraceptive distribution system and should be made responsible for ensuring the availability of adequate stocks at all levels within the Zones (States, LGAs and SDPs).
- iv. The Central Warehouse at Oshodi and the four Zonal Warehouses must be refurbished and made fully operational before FP commodities distribution commences.

Inventory Control

- v. In order to prevent shortages/stockouts, or excessive inventories, a Maximum—Minimum Inventory Control System should be introduced at each level backed by a reliable and efficient management information system.

Transportation

- vi. Deliveries of contraceptives from the Central Warehouse to Zonal Warehouses and from the Zonal to State Warehouses should be undertaken by employing the services of reliable private commercial transporters, as is being done by Sterling Products Nigeria PLC under the present arrangements.

Management Information System (MIS)

- vii. The NICARE and INVEC software programmes, which have been specifically developed for management information and inventory control under the Essential Drugs Programme, should also be used for contraceptive management. This will facilitate subsequent integration of family planning and EDP data management.



Computerisation

viii. Computerisation should follow and not precede the establishment of a reliable and functional manual system of data management. A desk-top PC computer with necessary software and printer and a plain paper fax machine should be provided at the Central Level and at Zonal Headquarters for storage, analysis and quick transmission of data.

Monitoring and Evaluation

- ix. The existing M and E Unit of the PHC Department should continue to be responsible for monitoring and evaluation of the family planning programme.
- x. To facilitate mobility of monitoring officers on field assignment, vehicles and imprest accounts for travel/per diem reimbursements should be provided and maintained at Central, Zonal and State levels.

Staffing

- xi Staffing at Central and Zonal levels should be strengthened by additional staff as follows:

At Central Level:--

- *One Assistant Director (Logistics)*
- *One Logistics Management and Monitoring Coordinator (LMMC) (by upgrading existing position of Planning Officer)*
- *One Assistant Logistics Monitoring Officer*
- *One Storekeeper/MIS Officer*

At Zonal Level:--

- *One Logistics Management and Monitoring Officer (LMMO)*
- *One Assistant LMMO*
- *One Storekeeper/MIS Officer*

Training

- xii. Basic training and refresher courses in logistics, monitoring and evaluation, use of computers, Quality Assurance and other subjects for appropriate officers at all levels

should be carried out with continued assistance from FHS preferably in collaboration with the M. and E. Unit and National Essential Drugs Programme. Training should include training of trainers with a view to arranging future courses at State/LGA levels.

Quality Assurance

xiii. In addition to strict adherence to the provisions of expiry date and stipulated conditions for warehousing and transportation, mid-life samples of commodities should be drawn randomly from the field and laboratory tested.

Cost Recovery

xiv. Federal guidelines for contraceptive cost-recovery scheme should be issued for optional adoption by States. Charges should be modest and monies collected should be apportioned among clinics, LGAs and States and used only for family planning activities through revolving imprest accounts.

General

- xv. To ensure speedy organisation of the different components of the proposed system and facilitate its early implementation, it is recommended that consideration be given to engaging a short-term Nigerian Consultant with appropriate expertise and local experience to support the Assistant Director (Logistics) during the early phases of implementation.
- xvi. An independent assessment and evaluation of the new logistics system should be carried out one year after it has become operational with a view to making such modifications as may be indicated by actual operating experience.

3. OBJECTIVES OF THE CONSULTANCY

3.1 Background

The Federal Ministry of Health and Human Services (FMOHHS) wants to ensure the accessibility of contraceptives at all levels of the delivery system as part of its efforts to intensify the development of the National Population Project (NPP). Several systems for the distribution of drugs and contraceptives already exist in both the Public Sector and the Private Sector: FMOHHS, UNICEF, FHS/USAID, Essential Drugs Programme in some States. FMOHHS considers it necessary to streamline these to discourage sprouting up of parallel systems which lead to duplication of efforts and wastage. To this end, the Ministry has resolved to:

- i Strengthen the National Public Sector distribution system for drugs, vaccines and contraceptives up to LGA level concentrating on supplies to Government and NGO service facilities
- ii. Allow the private sector contraceptive distribution system supported by USAID, to be catered for separately and not through the Public Sector.

The purpose of this consultancy is to review existing contraceptive distribution arrangements and to suggest the design of a contraceptive distribution system for the Public Sector with special emphasis on building and strengthening institutional capabilities in the areas of:

- i. Demand Forecasting and Procurement
- ii. Distribution and Warehousing
- iii. Inventory Control
- iv. Transportation
- v. Logistics Management Information System
- vi Monitoring and Evaluation
- vii. Computerisation
- viii. Staff Training
- ix. Quality Assurance

3.2 Methodology

This study employed the following steps:

- i. Collection and review of all available information relating to contraceptive requirements and their procurement, warehousing, distribution and monitoring from the time of their arrival in the country up to their distribution to the end user with particular reference to bottlenecks and constraints in the existing system.
- ii. Discussions and exchange of information with interested donors, international agencies and NGOs (FMOHHS, World Bank, FHS/USAID, UNFPA, UNICEF, Sterling Products, PPFN, etc). A list of persons contacted and places visited is given in Appendix 2.
- iii. Field visits to each of the four Health Zones covering ten states including Zonal Headquarters and selected riverine/desert areas.
- iv. Examination and assessment of the resources, procedures and constraints of existing arrangements.
- v. Determination of the most suitable option (unified, free standing or partly integrated) for contraceptive distribution and designing a logistics management system for the Public Sector.
- vi. Making specific recommendations in respect of the nine areas identified under 3.1 above.

COUNTRY PROFILE

4.1 Geography

Nigeria is a West African country situated between latitudes 3 and 15 East and longitudes 4 and 14 North. It is composed of 30 States, Federal Capital Territory (FCT) of Abuja and 589 Local Government Areas (LGAs). There is a Federal System of Government with each State having considerable autonomy including its own Ministry of Health. Subjects for legislation are divided into exclusive and concurrent legislative lists. The Federal Government has exclusive responsibility for national concerns such as Defence, External Affairs and Currency. States may legislate only on subjects on concurrent list such as Health, Education and Agriculture.

Total area: 924,000 square kilometres, bordered by Benin, Cameroon, Chad, Niger and the Atlantic Ocean.

Climate: Varied; equatorial in South, tropical in Centre, arid in the North.

Terrain: Southern lowlands merge into central hill and plateau; mountains in southeast, plains in the north.

Natural Resources: Crude oil, tin, columbite, iron ore, coal, limestone, lead, zinc, natural gas.

4.2 Population

		YEAR OF ESTIMATE
Total	88.5 million	1991 (census)
Population	115.3 million	1989
Growth Rate:	3.1% per annum	1989 (estimated)
Rural	75%	1986
Urban	25%	1986
Under 15yrs age	48%	1986
15-64 yrs	49%	1986
65+	3%	1986

Literacy Rate

Male	54%
Female	31%

Main Ethnic Groups

Hausa and Fulani	North
Yoruba	Southwest
Ibos	Southeast

Religion

Moslem	50%
Christian	40%
Indigenous	10%

4.3 Family Planning

Percentage Women using a Family Planning Method:

	% All Women (age 15-49)	% Currently Married Women (age 15-49)
Any Method	7.6	6.0
Any Modern Method	3.8	3.5
Any Traditional Method	3.8	2.5
Method-Mix (Modern):		
Oral Pills	1.4	1.2
IUD	0.7	0.8
Injectables	0.7	0.7
Condom	0.5	0.4
Foam Tablets	0.2	0.1
Female Sterilization	0.2	0.3
Male Sterilization	0.0	0.0
TOTAL	3.8	3.5
Method-Mix (Traditional):		
Periodic Abstinence	2.4	1.4
Withdrawal	0.7	0.5
Other Methods	0.7	0.6
TOTAL	3.8	2.5

Total Fertility Rate (TFR)

	National	Northwest	Northeast	Southeast	Southwest
Women 15-49yrs.	6.0	6.7	6.6	5.6	5.5
Mean Number of Children Ever Born:	3.3				

Percent of Current Use of FP Methods Among Currently Married Women (15-49 years):

	Modern Methods	Traditional Methods	TOTAL
Urban	9.6	5.3	14.9
Rural	1.9	1.7	3.6
Northwest	0.7	0.5	1.2
Northeast	1.3	0.7	2.0
Southeast	3.9	5.1	9.0
Southwest	10.5	4.5	15.0
By Education			
No Education	1.3	0.7	2.0
Primary	5.4	4.1	9.5
Secondary	12.3	8.2	20.5
Higher	24.2	24.4	48.6
By Number of Children			
None	1.6	2.6	4.2
1	1.7	1.9	3.6
2	2.6	1.6	4.1
3	2.8	2.4	5.2
4 or more	5.6	3.2	8.8

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Percent of Current Users of Modern Methods By Source From Which Method Obtained

	Pill	IUD	Inject.	Condom	All modern methods
TOTAL GOVERNMENT	29.2	61.0	44.9	13.6	37.1
Hospital	19.6	41.2	31.9	7.3	26.1
Health Center	8.3	19.8	10.9	6.2	10.1
Doctor	1.3	0.0	2.1	0.0	0.9
TOTAL PPFN (NGO)	2.3	7.8	3.6	3.7	4.4
TOTAL PRIVATE	61.0	19.8	46.6	52.4	46.2
Health Centre/ Hospital	4.1	18.6	35.6	4.1	13.3
Pharmacy	24.0	0.0	0.0	14.4	11.8
Patent Medicine Shop	27.4	0.0	3.0	27.9	16.4
Others	5.5	1.2	8.0	6.0	4.7
TOTAL OTHER SOURCES (Mission/Friends/Relatives etc.)	7.5	11.1	2.9	15.1	9.9
Don't Know/Missing Date	0.0	0.2	1.9	15.2	2.5
Total%	100.0	100.0	100.0	100.0	100.0

Source: *Nigeria Demographic and Health Survey, 1990*
Preliminary Report

5. CURRENT PUBLIC SECTOR DISTRIBUTION SYSTEM

5.1 Description

At present all contraceptives, except injectables, are initially stored in Sterling Products Warehouse (SPNL) in Lagos from where they are sent to SPNL's Territorial Warehouses and Depots along with their own products. Commercial transporters are used for this purpose: SPNL do not maintain their own vehicles and the arrangement with private commercial transporters has proved to be very efficient, reliable and cost effective. Port clearance formalities for imported contraceptives on their arrival from abroad is also entrusted to a private company which completes all formalities and delivers the consignment to SPNL Warehouse in Lagos after clearance.

Injectables were so far supplied by UNFPA directly to SFPCs through UNFPA's Zonal Programme Officers. In future, however, it is expected that supplies will be made through the Ministry's Central Warehouse at Oshodi.

State Family Planning Coordinators (SFPCs) collect contraceptives from SPNL Warehouse in their States or SPNL arrange to deliver the supplies if for some reason collection by SFPC is not possible. This is done according to mutual convenience and the arrangement is working satisfactorily. However, SFPCs cannot requisition any supplies from SPNL even if they are facing shortage and need supplies urgently. Every delivery, as well as the quantities to be delivered, has to be authorised by FHS in Lagos and SPNL act only on their instructions. After the contraceptives reach SFPC's Warehouse, their further distribution to LGAs, SDPs and other Health Institutions is the responsibility of SFPC who follows normal Government procedures for this. LGAs and SDPs usually collect their requirements from SFPC's store or from the State's sub-zonal store in those states where sub-zonal stores have been established to facilitate collection by LGAs/SDPs. If necessary, SFPCs also supply contraceptives directly to SDPs/Clinics during their field visits. All collections and supplies from SFPCs to LGAs/SDPs are usually undertaken quarterly but, if necessary, supplied more frequently.

5.2 Constraints and Problems

1. The system is highly centralised and non-participatory. Forecasts of contraceptive requirements are guestimates by those not directly involved in service delivery. The

result is errors and distortions in needs assessment and shortages in the field.

2. Response to supply problems in the field can come only from those based away from the day-to-day operations of family planning i.e. donor agencies and their staff. This is often tardy and ineffective. This was reported at the conference of SFPCs at Calabar in 1991.
3. The rigidly hierarchical and bureaucratic management of supply and information is inflexible and unable to adjust to the many and varied needs of the system. For instance, only FPIA can decide when, how much and to whom contraceptives will be supplied. The result is frustration among service providers and their supervisors.
4. Supply patterns are based on historical data with small theoretical increases. New demand, latent or real, is not provided for. Reduced supply depresses "demand" which in turn further depresses supply, forming a vicious circle.
5. There seems to be an element of "donor obsession" with "leakages" and an over-emphasis on commodity tracking at the expense of feeding the programme with adequate supply of contraceptives. There is, moreover, no evidence of any significant leakage and some field personnel attribute the leakage controversy partly to inter-agency rivalry.
6. Roles and responsibilities of officers at different tiers of Government (primary, secondary and tertiary) and those of different agency divisions (FPIA, Pathfinder, UNFPA) are poorly defined (or not properly demarcated) leading to conflicting and inefficient staff deployment.
7. Arising from poor definition of roles is supervisory weakness at field operating levels where, for instance, only about 50 per cent of service delivery points (or Service Providers at the LGA level) report regularly to SFPCs or are regularly monitored by them.
8. The strategic role of the Zonal Office in programme supervision and support to States and LGAs is underdeveloped. Zonal Offices have at present no role in ensuring uninterrupted availability of contraceptives in the field as they hold no stocks. The Zonal Office, in fact represents federal authority and capability at the regional level without the disadvantages of bureaucracy and distance of Lagos. It can respond quickly and effectively in providing logistics support to States and LGAs if its capacity is adequately strengthened.

- P. Specific provisions have not yet been made for the needs of new or weak States and for LGAS, many of which are new. Some are truly strapped of resources and of technical and managerial capacity to carry out their family planning mandates.
10. Standard management information system, with requisite computerization, has not yet been established. Frequent changes in forms for monitoring and reporting have been a source of frustration and confusion to Service Providers and Coordinators alike. The newly compiled Monitoring and Evaluation Manual of the Federal Ministry of Health and Human Services, PHC Department (February 1992) promises to solve this problem but relevant staff still need to be trained in its use.
 11. Communication within and among different levels is weak. The absence of information feedback is a common cause of complaint and inaction. Communication facilities—telephone, telex or fax, postal and courier services etc—are in most cases not available, are broken down or not used.
 12. Sensitization to quality assurance is weak. Given the risks of product deterioration as a result of poor storage conditions at the ports and field facilities, QA ought to receive greater focus during staff training and field monitoring.
 13. Public sector family planning has not established effective cooperation with the private sector—modern or traditional—who in many areas of the country remain the preferred choice for family planning. The probable exception are the occasional contacts with PPFN.
 14. Inter-agency, inter-institutional and inter-project/programme cooperation is weak. For instance, cooperation between FP and EPI, or FP and EDP, or between FP and NACP in logistics management has not yet developed. This should be encouraged with a view to gradually integrating supply and distribution of common items e.g. condoms for FP and AIDS Control Programmes.
 15. IEC activities for FP are weak and need to be strengthened at all levels.

6. **PROPOSED PUBLIC SECTOR CONTRACEPTIVE LOGISTICS SYSTEM**

6.1 **Forecasting Contraceptive Needs**

It is proposed that forecasting of future contraceptive needs should be made through a consultative exercise involving every level of the contraceptive distribution chain from Service Providers at the Health Facility level up to LGAs, States and Zonal levels.

The assessment of future contraceptive needs should take into account:

- i. Trends of demand as shown by past and current usage data;
- ii. Future programme promotion and IEC plans and demographic objectives, if any;
- iii. Realistic assumptions of likely increase in the acceptance of family planning and of method-mix.

This exercise should commence at the LGA level with the LGA Family Planning Coordinator discussing with family planning Service Providers their future yearly requirements of contraceptives for each of the next three years. The three factors mentioned above as well as other local factors which may have a bearing on contraceptive demand should be taken into account while projecting future needs of SDPs. Contraceptive requirements of the LGA will be the sum total of SDP projections.

On the completion of this process at the LGA level, the State Family Planning Coordinator should meet with all LGAs in the State to consider LGA projections and determine State contraceptive requirements. Zonal Coordinators would similarly determine Zonal requirements in consultation with SFPCs of all States in their respective Zones. National level projections would finally be made in consultation with Zonal Coordinators at a meeting to which two States from each Zone will be also invited.

Such a bottom-up consultative process involving every level can be expected to result in a more realistic assessment of future needs and, by involving Service Providers and Supervisors at all levels, also give them a sense of ownership of the programme and, therefore, a commitment to achieving its objectives.

There should be ongoing consultations between different levels during the course of this exercise, particularly if a modification in a proposed demand forecast is considered necessary. The reasons for any modification should be given promptly to all those involved in preparing the original forecast so as to create a climate of trust and understanding. The

final decision regarding the quantities to be procured must be that of the Government and not outside it. This methodology for forecasting contraceptive requirements was discussed during our field visits and evoked enthusiastic support from everyone without exception.

This exercise should be completed at least two weeks before the date by which procurement orders have to be placed at the national level. Considering the time the whole process will necessarily take, the exercise should commence at LGA/SDP level at least three months before the desired procurement order date. After the finalisation of contraceptive requirements and placement of procurement orders, each Zone, State and LGA/SDP should be informed of the quantities of contraceptives they can expect to receive in the following year.

6.2 Procurement of Contraceptives

The procurement process should start as soon as the requirements of contraceptives and other FP commodities have been finalised and approved by the Government. The procurement procedure for those commodities which are to be provided by Donor Agencies will depend upon the agencies concerned. As regards the commodities which have to be purchased on Government account, the procedures laid down for the procurement of Essential Drugs for the Primary Health Care Programme will be the most effective and economical method for procuring FP commodities. The procurement of essential drugs is undertaken by FDAC through International Competitive Bidding which should be used also for FP commodities.

The lead time between the placing of an order and the actual receipt of commodities in the Central Warehouse in Lagos for distribution to the field can be as much as eight months and, therefore, the whole process of estimating and finalising the requirements and placing of orders will have to be planned well in advance to ensure uninterrupted availability of supplies within the system. Thus, contraceptive requirements for 1994 will have to be ordered latest by January 1993 which means that the consultative exercise for estimating the requirements for 1994 will have to begin in October 1992. It is presumed that the requirements for 1993 are already in Lagos or will begin to arrive during the course of this year (1992).

Proposed Cycle of Contraceptive Forecasting Exercise and Yearly Procurement

Phase 1: October 1, 1992

Beginning of the First Yearly Cycle and Consultative Forecasting Exercise for 1994

- CWH Oshodi has stock level of 15 months (assumed).
- Initiate Contraceptive Forecasting Exercise at LGA, State, Zonal and National levels to assess contraceptive requirements for the years 1993, 1994 and 1995 taking into account available FHS projections for these three years.(Johnson, Atkinson and Blackburn Report—September 1991).

Phase 2: January 1, 1993

Procurement of contraceptives for 1994

- Minimum stock level of 12 months reached at CWH at Oshodi (Reorder Point).
- Forecasting Exercise completed and contraceptive requirements for 1994 determined.
- Procurement action for the contraceptives required for 1994 initiated and orders placed.

Phase 1: September 1, 1993

Beginning of the Second Yearly Cycle and Consultative Forecasting Exercise for 1995

- Safety stock level of 4 months reached at Oshodi CWH.
- Contraceptives ordered in January 1993 arrive, bringing the stock level to 16 months (to cover September—December 1993 plus full year 1994).
- Forecasting Exercise to assess contraceptive requirements for 1994, 1995, 1996 initiated.

Phase 2: January 1, 1994

Procurement of contraceptives for 1995

- Minimum stock level of 12 months reached at Oshodi CWH (Reorder Point).
- Forecasting Exercise completed. Contraceptive requirements for 1995 determined.
- Procurement action for contraceptives required for 1995 initiated and orders placed.

The cycle of Contraceptive Forecasting Exercise followed by procurement of contraceptives should begin in September each year and should be completed the following January.

This time frame may be changed if considered necessary.

Note: 1

The Forecasting Exercise should be for a three year period. The forecasts for the first two years made in the previous year should be modified to reflect current programme performances. The forecast for the third year, however, should be considered as an indicative figure to be firmed up during the Forecasting Exercise in the following year. Thus:

1992 Forecasting Exercise (October, 1992): Will modify available FHS projections for 1993 and 1994 to reflect current performance trend. Will give an indicative figure of 1995 contraceptive requirements.

1993 Forecasting Exercise (September, 1993): Will modify earlier 1994 and 1995 forecasts to reflect current performance trend. Will give an indicative figure of 1996 contraceptive requirements.

Note 2

For the purpose of initial stocking of the Central Warehouse, the estimates of contraceptive requirements for 1993, 1994 and 1995 made by Johnson, Atkinson and Blackburn and given in their report submitted to Family Health Service Project in September 1991, should be used. These are given in Table 1 below:

TABLE 1

Estimated Usage of Contraceptives in the Public Sector

	('000)					
	1991	1992	1993	1994	1995	1996
Copper-T (units)	130	144	160	170	185	200
Lo-Femenal (cycles)	1000	1350	1650	1800	2000	2200
Foam Tablets(tablets)	1350	1440	1600	1750	1850	2000
Condoms (pieces)	3800	4500	5000	5500	5800	6000
Injectables (doses)	300	500	600	700	800	1000
TOTAL COSTS US\$	840	1110	1290	1440	1590	1820

Note:

Costs calculated on basis of 1991 USAID Unit Cost without adjustment for inflation: Cu-T \$1.06; Lo-Femenal \$0.15; Foam Tablets \$0.104; Condoms \$0.0451. Injectables, not supplied by USAID, costed at \$0.80 per dose.

Source: Report "Contraceptive Logistics Management Assistance" by Timothy Johnson, Brice Atkinson, Bonita Blackburn—Nigeria, September 14–21, 1991.

6.3 **Distribution and Warehousing**

6.3.1 **Distribution**

Zonal Headquarters will be the focal points under the Public Sector Contraceptive Distribution Scheme. They will be responsible for ensuring the availability of adequate stocks at all levels within their Zones (States, LGAs and SDPs) as also for supervision, monitoring, evaluation, MIS and for forecasting contraceptive requirements. The Central Warehouse at Oshodi will be primarily a feeder warehouse receiving and storing contraceptives procured from abroad and keeping the Zonal Warehouses adequately supplied.

In addition, the Central Headquarters will have the overall responsibility for coordinating and overseeing the logistics system including supervision, monitoring, evaluation and MIS. All data on contraceptive supply, inventory and usage will be kept at Central and Zonal levels, and analysed for the purpose of assessing demand trend and for future planning.

6.3.2 **Warehousing**

i. **Central Warehouse**

It is estimated that 3500 sq.ft of storage space will be needed at the Central Warehouse in Oshodi to store 18 months stock of contraceptive needs for 1996 based on projections made in the report of Johnson, Atkinson and Blackburn as follows:

	Quantity (in millions)	Space Required for 1 million units of Contraceptives	Total Space Required
Condom (pcs)	9	120 sq. ft.	1080 sq. ft.
Oral pills (cycles)	3.3	160 sq. ft.	530 sq. ft.
Copper-T (units)	0.3	1350 sq. ft.	405 sq. ft.
Injectables (doses)	1.5	850 sq. ft.	1275 sq. ft.
Foam Tablets (tablets)	3	60 sq. ft.	180 sq. ft.
TOTAL SPACE REQUIRED			3470 Sq. ft.

Note: Space requirements have been calculated on the basis of existing carton sizes and cartons being stacked to a height of 8 feet. Allowance has been made for adequate handling space equal to 50% of the actual volume of the cartons to be stored.

Section D of the Central Medical Stores at Oshodi is being made available for contraceptive storage. This consists of a large covered area within which there are two enclosed areas. The measurements of each area (in feet) are as follows:

Main storage area:	$60 \times 48 = 2880$ sq. ft.
Enclosed Area 1:	$44 \times 10 = 440$ sq. ft.
Enclosed Area 2:	$60 \times 10 = 600$ sq. ft.
TOTAL AREA:	3920 sq. ft.

Enclosed Area 1 and 2 totalling 1040 sq. ft. can be easily airconditioned and would be very suitable for storing condoms. However, Area 2 is presently being used by Medical Stores Depot for storing medical equipment and is not available for contraceptive storage. This leaves 3320 sq. ft. of space for contraceptives which may be just adequate for starting logistics operations. However, it would be desirable to have the entire 3920 sq. ft. to provide airconditioned space for condoms and at the same time, to have a provision for the extra space which will be required as the use of contraceptives increases.

Shelving, pellets, fork lift, trolleys and other equipment as per the list prepared after an earlier survey should be provided on an urgent basis. Enclosed Areas 1 and 2 (if made available) should be air-conditioned and fans provided in the main storage area.

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ii. Zonal Warehouses

None of the Zones has an operating warehouse at present. In a survey carried out in 1990, warehouse space was identified for each Zone and proposals for bringing all four Zonal Warehouses up to the required standard were made. However, actual work has not been carried out so far but is expected to commence soon and completed by July this year. The importance of having functional and operating Zonal Warehouses cannot be over-emphasized. In fact, the distribution of FP commodities cannot commence until all four Zonal Warehouses and the Central Warehouse at Oshodi are fully operational.

The sizes of the Zonal Warehouses proposed earlier are as follows:

Zone "A"* (ENUGU) 48' X 32' = 1536 sq.ft.

Zone "B" (IBADAN) 50' X 25' = 1250 sq.ft.

Zone "C" (KADUNA) 26' X 13' = 338 sq.ft.

Zone "D" (BAUCHI) 45' X 20' = 900 sq.ft.

It is estimated that about 1000 sq. ft. of storage space would be required for a Zonal Warehouse. Therefore, the warehouse space in all zones except Zone "C" (Kaduna) appears adequate. Arrangements for additional space for Kaduna Zonal Warehouse should be initiated immediately. If it is not possible to extend the existing warehouse, additional storage space should be arranged nearby for keeping bulk stocks.

iii. State, LGA and SDP Stores

Relatively small space is required for storing contraceptives and other FP commodities at State L.G.A. and SDP levels and this is generally available. Based on expected contraceptive use in 1996, it has been estimated that on average a State would require about 150–200 sq. ft of storage space for its maximum stock level, and LGA/SDP, substantially lesser space: only one or two, cupboards equivalent. By and large adequate and secure storage space is available at State and LGA levels. However, some improvement of store rooms by way of better ventilation, provision of fans/exhaust fans (air conditioning, in States subject to high temperatures), shelving, pellets and furniture for the use of storekeeper including a filing cabinet and/or a cupboard is required in many cases. This should be undertaken over a reasonable period of time after surveying existing stores.

* Temporarily rented facilities at the former Root Crops Research Centre premises.

6.4 **Transport: Movement of Contraceptives**

i. **Movement from Central Warehouse Oshodi to Zonal Warehouses**

All contraceptives and other family planning commodities will be initially stored at the CWH in Oshodi from where they will be transferred to Zonal Warehouses as per their quarterly requisitions. Private commercial contractors should be used for this purpose as is being done by Sterling Products. FDAC has similar arrangements with Sky Power for Essential Drugs. It will not be cost effective to have a Government owned fleet of vehicles for this considering that only four consignments—one to each of the four Zonal Warehouses—will have to be sent by the CWH every three months. Zonal offices must not be asked to collect supplies from Oshodi as this will be, on the whole, ~~less~~ less efficient than CWH delivering supplies to Zonal Warehouses. However, they should be responsible for sending quarterly requisitions to Oshodi based on which the CWH should make dispatches to Zonal Warehouses.

ii. **From Zonal Warehouses to State Stores**

Contraceptives and other FP commodities will be supplied by Zonal Warehouses to States on the basis of their quarterly requisitions. Commercial Transporters should be used for this purpose by the Zonal Warehouses for the same reason as applicable to CWH. Supplies may also be collected by States from Zonal Warehouses but this should be only under exceptional circumstances. Zonal Offices will also independently monitor State and LGA inventory levels and make, if necessary spontaneous supplies to ensure maintenance of proper stock levels and to prevent shortages. This will be done in consultation with SFPCs.

iii. **From States to LGAs/SDPs/Secondary Health Institutions**

Present arrangements for collection/supply of contraceptives on quarterly basis should continue. SFPCs should be responsible for monitoring stock levels at LGA /SDP levels and for ensuring that sufficient contraceptives are available at all levels to avoid shortages. Particular attention should be given to riverine LGAs/SDPs and those which are in remote areas. SFPCs may also make spontaneous supplies to LGAs/SDAs if necessary.

iv. **Supplies to Tertiary Institutions/Armed Forces/Police**

Secondary and tertiary institutions including the Armed Forces, at present collect their

requirements of contraceptives directly from State Warehouses and account for them to SFPCs. This arrangement is working well and should be continued.

6.5 Maximum—Minimum Inventory Control System

Sufficient stocks of family planning commodities must be maintained at each level to prevent shortages or stockouts without holding excessive inventories which may result in product deterioration because of storage. To achieve this, it is necessary to introduce a Maximum—Minimum Inventory Control System backed by a reliable and efficient Management Information System.

The system is so named because maximum and minimum stocks which should be held at each level are laid down. Fresh stocks must be requisitioned as soon as minimum stock level has been reached, and the total of stocks in the warehouse and those on order must not exceed stipulated maximum stock level.

The quantities of stocks which should be maintained at different level have been estimated as follows:

Level	Safety Stock	Lead Time	Number of Months of Stock			
			Minimum Stock	Maximum Stock	Normal Supply Quantity	Maximum Supply Interval
			c		e	f
	(a)	(b)	(a + b)	(d)	(d—c)	
National	4	8	12	24	12	12
Zonal	4	2	6	9	3	3
State	2	2	4	7	3	3
LGA	2	2	4	7	3	3
SDP	2	2	4	6	2	2

Note

- i. Lead time between placing of order and actual arrival of stocks in the Central Warehouse at Oshodi has been kept at eight months because of the normal delay in international procurement, port clearance etc. This lead time is considered the minimum and will have to be adjusted later based on actual experience.

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- ii. Normally, international procurement at the National level should be on a yearly basis though actual deliveries may be staggered to ensure that sufficient time is available between the arrival of stocks and expiry date for the products to be used within their life period.
- iii. In the case of Zonal, State, LGA and SDP levels, the lead time has been kept at two months considering the time it takes to make arrangements for transport and for paper work, approvals etc. The actual time is likely to be less and should be adjusted later.
- iv. The supply interval for Zonal, State and LGA levels has been kept at three months to avoid the necessity of making more frequent arrangements for transport. Service Delivery Points, however, should normally collect supplies every month when FP Service Providers visit LGAs for submitting their monthly performance reports.
- v. **Safety Stocks:** The buffer or reserve stock which must be kept on hand to protect against stockouts due to delayed deliveries or markedly increased demand.
- vi. **Lead time:** The time interval between the time the supplies are ordered and when they are received in the warehouse and are available for distribution.
- vii. **Minimum Stock:** This is the total of safety stock and the quantity required until fresh stocks arrive i.e. stocks needed for making supplies during the Lead Time. This is also the point at which fresh stocks must be ordered (Reorder Point).
- viii. **Maximum Stocks:** The quantity of stock above which inventory levels should not normally rise. Routine stock orders should be this quantity minus stock on hand minus any quantity already ordered.
- ix. **Maximum Supply Interval or Order Interval:** While fresh stocks must be requisitioned as soon as minimum stock level is reached, it is advisable to stipulate the maximum interval between two orders even if minimum stock level has not been reached. This would ensure regular collection/supply of commodities, thus ensuring uninterrupted availability.
- x. **Normal Supply Quantity or Order Quantity:** The quantity needed to bring the stock to the maximum stipulated level minus stock actually on hand minus the quantity ordered earlier (if any) the delivery of which is awaited.

6.6 Management Information System (MIS) and Computerisation

6.6.1 Recording, Reporting and Monitoring

While records were found to be properly kept in ledgers and files of State Stores and Service Delivery Points visited, reporting and monitoring were weak. Only about 50 percent of SDPs reported their activities regularly or provided the data required for monitoring and evaluation. There was no evidence that available information and data provided were analyzed and used as functioning tools in day-to-day management. The very low level of communication and feedback below the State level, i.e. between States, LGAs and Service Providers, was contributory to this failure. While many SFPCs displayed bar-charts and pie-charts of FP achievement and method mix prominently on their office walls, such charts were usually incomplete and out-of-date with no evident linkage for planning and decision-making.

The problem of inadequate information seemed to have plagued logistics even at the top. Mario Jaramillo in a recent study of the existing arrangements (January, 1992) states:

“Although all reports consulted indicate that information is improving, the Public Sector and the Private Sector Divisions of FHS were unable to fill four simple tables with the most basic pieces of information: clinics in operation, clinics reporting, users of contraceptive methods and new users in the public and private sectors, in 1989, 1990, and 1991, month by month. Only fragments of this information were obtained with great difficulty.”

During the present consultancy, we were similarly unable to get information / data from FHS on a State by State break-down of contraceptive consumption by quantity, method and period.

A reliable and properly functioning information system is an essential pre-requisite for efficient logistics management. Appropriate information on use and movement of contraceptives from top to bottom as well as stocks of contraceptives at each level must be compiled and transmitted bottom-up. The main problem at present is the inability of Government Officers to travel because of non-availability of vehicles compounded by low travel and per diem rates, the payment of which is often much delayed. This hinders movement of officers responsible for monitoring and collection of relevant data. The proposed logistics system, therefore, requires additional resources input in vehicles, communication equipment and imprest account for travel reimbursements to facilitate mobility

of monitoring officers on field assignments.

Monitoring Forms: The relevant monitoring forms given in the Book 4HF and Book 4HF(A) in the M and E Manual (1990) are as follows:

- i. Form 4HF-1 (sides A and B): Daily Record of Family Planning (FP) activities in the Health Facility.
- ii. Form 4HF-2 (sides A and B): Monthly Record of FP activities in the Health Facility.
- iii. Form 4HF-3 (sides A and B): Annual Record of FP activities in the Health Facility.

In addition, Forms No. 1, 2, 3 and 3A providing data on FP activities and commodities dispensed are also being used at the Health Facility, LGA, State and Zonal levels. Forms ILG7 and ILG8 are similarly used by VHWs/TBAs.

A Monitoring Form/Check List for the use of Monitoring Officers is given in Appendix 3.

6.6.2 Computerisation

NICARE and INVEC MIS Software

The Federal Monitoring and Evaluation Unit has, with assistance from CCCD/FHS, developed two softwares for PHC including FP. These are NICARE and INVEC. NICARE records the services provided at SDPs for FP and other PHC activities including client records while INVEC records procurement and inventory data on all commodities and is very suitable for inventory management and stock control. Clinics/SDPs will forward relevant data to LGA Headquarters which will collate data from all LGA clinics and forward consolidated figures to State Headquarters with copies to Zonal Headquarters. States in turn will collate LGA data and forward to Zonal Headquarters with copies to M and E Unit of PHC Division in Lagos who will directly receive collated data for all States also from Zonal Headquarters. Feedback of information will be routed through the reverse channel. It should be pointed out that feedback is extremely important to a successfully functioning MIS. A common complaint of operators at the primary and secondary levels under the present arrangement was that they did not receive information or responses from above.

Resources

One Desk Top PC Computer with necessary software and printer and one plain paper FAX machine should be provided at Zonal Headquarters and at Central Level for storage,

analysis and quick transmission of data.

Appropriate training in monitoring and evaluation should be arranged for all staff involved in monitoring and evaluation with regular refresher courses. Such courses can benefit from the involvement of FHS who have a good track record in both field training and MIS.

Efforts must be made to first establish a functioning manual system of information gathering at every location before introducing the new computer system. There can be no role for computers in the management of FP logistics until an effective, reliable and proven manual system has been established and institutionalized. Both systems should continue in parallel for sometime thereafter, with the computer providing advantages in speedy and comprehensive analysis of data, while the routine manual system can be relied upon even in exceptional circumstances such as during periods of power failure and staff changes.

6.7 **Staffing and Other Resources**

6.7.1 **Present Staffing**

The present logistics staffing arrangement has two basic disadvantages:

- i) There are two parallel lines of staff responsible to two different authorities: FMOI-IHS and FHS/USAID;
- ii) The objectives, orientation and day-to-day activities and expectations of staff are also different. While FHS/USAID staff are expected to monitor and track commodities, the Ministry expects its staff to monitor and push Service Provider achievement (i.e. acceptors). The efforts of these two different sets of staff are poorly coordinated and there have been overlaps and conflicts, e.g. over the subject of commodity "leakage".

6.7.2 **Proposed Staffing and Other Resources Under the New System**

In the new system, staffing has been streamlined under the Ministry's sole authority. In total, the number of staff engaged will not increase over the combined deployment of the present system. Indeed, if the staffing requirements of Sterling Product's warehousing were reckoned, an economy will be achieved in storekeeping staff. More importantly, staff deployment will be more purposeful and effective under a single grid of authority.

For smooth and efficient functioning of the new logistics system, it will be necessary to strengthen Central and Zonal Warehouses as follows:

i. Central Level

Staff: 1 Assistant Director (Logistics)
1 Logistics Management and Monitoring Coordinator(LMMC)
1 Assistant Logistics and Monitoring Officer
1 Storekeeper cum MIS officer

Computer

One Desk Top Computer 386 SX; 4MB RAM; 100MB Hard Disk and 3½" Floppy Disk; colour monitor; OKIDATA 393 WIDE-CARRIAGE printer and necessary software. Specifications should not be lower than those stipulated for computers in the Essential Drugs Programme to permit their continued use on integration. Provision for 800 Watts/220 Volt UPS (Uninterrupted Power Supply) should be also made because of frequent voltage fluctuations which damage computers.

Vehicle

One Landcruiser, primarily for logistics management and monitoring work.

Plain Paper FAX Machine

One each at the Central Warehouse and Zonal Offices.

ii. Zonal Level

Staff: Three new positions at each Zonal Office:

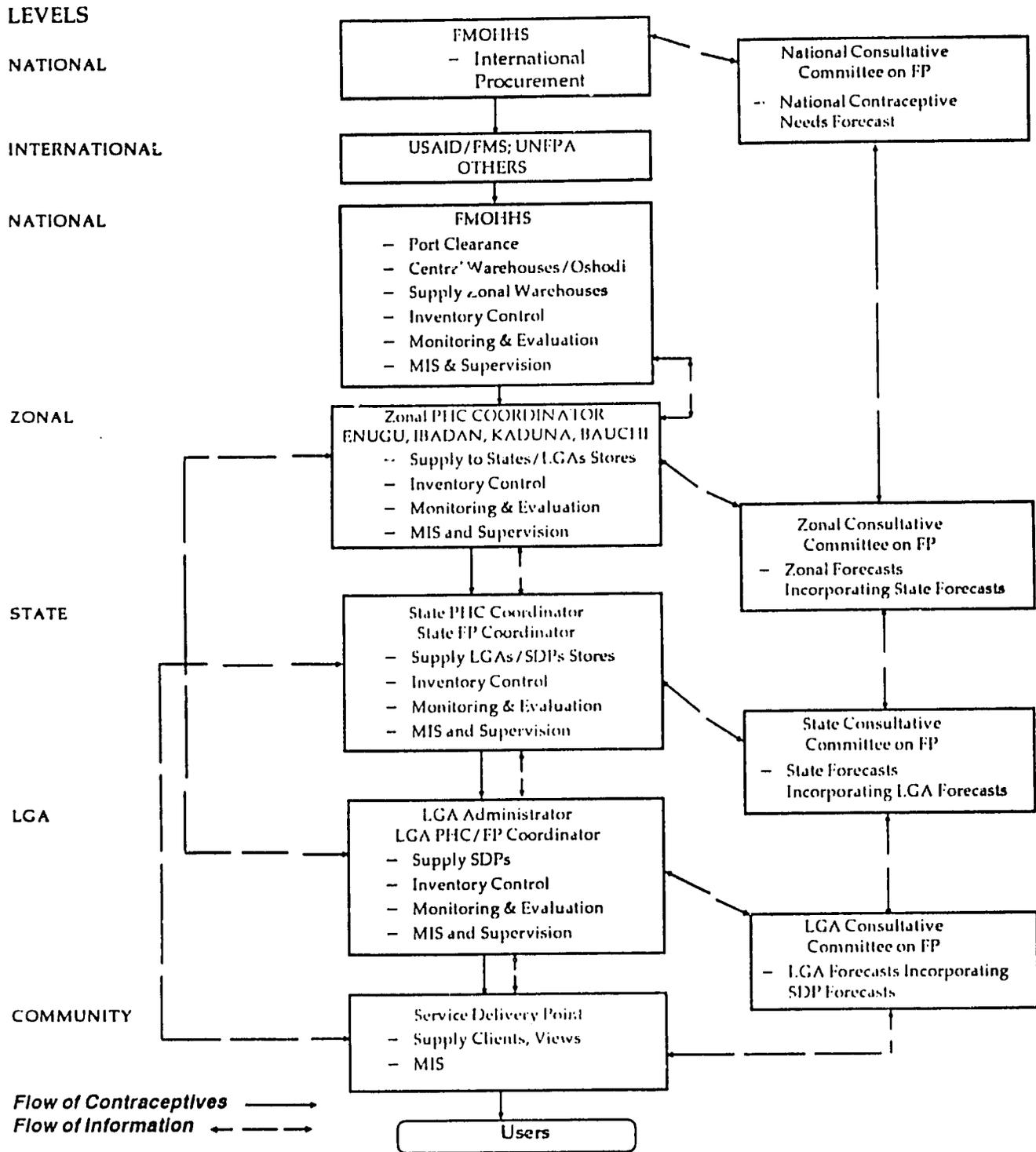
1. One Logistics Management and Monitoring Officer (LMMO) at level 9
2. One Assistant LMMO at level 8
3. One storekeeper cum MIS officer at level 7.

Job descriptions are given in Appendix 4. None of these functions is currently performed by Zonal Offices.

While the work of these offices will initially cover contraceptives, it is foreseen that they will eventually cover also the PHC Essential Drugs Programme as the two distribution systems are integrated. Consequently, their initial work in contraceptive distribution will serve as training for their subsequent larger responsibility. These offices should be also given special local training in logistics management, monitoring and evaluation, and in computer.

It is proposed that each Zonal Office should be provided with a computer on which

SCHEMATIC REPRESENTATION OF THE PROPOSED PUBLIC SECTOR CONTRACEPTIVE LOGISTICS AND INFORMATION SYSTEM



required information on contraceptive procurement, inventory, distribution and use will be maintained. A new computer software called INVEC has been developed by Management Sciences for Health in Boston and is being installed at the Central Medical Stores in Lagos for the World Bank assisted Essential Drugs Programme. This software has a provision for incorporating logistics data also on contraceptives and is, therefore, available for immediate use. Moreover, subsequent integration of contraceptive and presential drugs systems will be much easier if the same software is used for inventory control of both commodities.

An essential requirement for monitoring, supervision and for sending supplies to the field is the availability of transport and of funds needed for travelling. It is proposed that two Landcruisers should be provided at each Zonal Office of which one should be used primarily for supervision and monitoring work. The second vehicle, which should be larger than the first one, should be used not only for supervision and monitoring but also for taking emergency supplies from the Zonal Warehouse to States and, when necessary, to LGAs.

6.7.3 Present Staffing and Proposed Staffing

PRESENT STAFFING	LEVEL LOCATION	PROPOSED STAFF	RESPONSIBILITIES
—	FMOHHS	ASSISTANT DIRECTOR (LOGISTICS)	Collates national forecasts, coordinates donor agency procurement; arranges logistics training, continuous monitoring/evaluation. Coordinates contraceptives/condom requirements of NPP and NACP/STD.
Planning Officer	FMOHHS	LMMC	Undertakes continuous monitoring of commodities movement with periodic evaluation.
	CENTRAL WAREHOUSE OSHODI	STOREKEEPER/MIS OFFICER	Responsible for port clearance and storage, inventory control and quality assurance, supplies to zonal warehouses.
FHS Commodity Logistics Officer (CLO)		ASST. LMMC	Assists LMMC; undertakes and continuous monitoring of Zonal & States contraceptive supply status; conducts periodic evaluation.
	ZONAL OFFICE	LOGISTICS MANAGEMENT & MONITORING OFFICER (LMMO)	Determines/finalises zonal forecasts; oversees activities of Assistant Zonal Coordinator; responsible for monitoring and logistics and IEC.
FHS Zonal Programme Officer (ZPO)	ASSISTANT LMMO	→	Assists LMMO; Collates zonal forecasts; coordinates logistics training and continuous monitoring of States' and LGAs' contraceptive supply status, conducts periodic evaluation.
Commodity Logistics Officer (CLO)			
Store keeper (Sterling Territorial Warehouse) Storekeeper	ZONAL WAREHOUSE	ZONAL STOREKEEPER/MIS OFFICER	Undertakes to collect/ receive and store FP commodities; supplies to state warehouses and selected LGAs. Monitors movement of contraceptive and Quality Assurance. Periodically reviews the functioning of the

SFPC ASFP ZPO & CLO	STATE OFFICE	STATE FAMILY PLANNING COORDINATOR	logistics system and contraceptive supply status in the field (State and LGAs). Collates and assesses state forecasts; coordinates activities of NGO's and other agencies. conducts training, continuous supervision/monitoring, evaluation of state FP activities and I.E.C.
FHS ZPO & CLO STATE Storekeeper Sterling Depot Storekeeper	STATE WAREHOUSE	ASSISTANT SFPC STATE STOREKEEPER/ MIS OFFICER	Assists State Family Planning Officer in stated responsibilities. Collects, stores and controls commodities and supplies to LGA stores, state sub-zonal stores and service delivery points as appropriate. Conducts continuous monitoring of commodities movement, their Quality Assurance and periodic reviews of contraceptive reporting/ MIS and supply status in the field (LGAs, SDPs).
PHC Coordinator (FP/MCH)	LGA STORE	LGA MCH—FP COORDINATOR	Collates LGA family planning needs and forecasts; stores and controls commodities inventory; links LGA with state and zonal activities in the areas of monitoring and periodic evaluation of LGA service providers.
Service Provider	HEALTH FACILITY	FAMILY PLANNING SERVICE PROVIDER	Collates commodities requirements for service delivery point; stores and controls inventory; checks product quality, provides relevant services and conducts I.E.C. and periodic evaluation of all activities. Collaborates in the relevant community activities and work of VHWs.

INVEC

Inventory Management Program

INVEC is a universal inventory control software package that revolutionises medical store management by providing instant, up-to-date information about all aspects of Central Medical Store or Regional Store operations. Developed in 1990 through a joint collaboration of Tropical Software LTD, of St. Lucia, and the Drug Management Program of Management Sciences for Health in Boston, INVEC is now in use in four countries and scheduled to be installed in several others in the near future. MSH is responding to domestic inquiries, and French and Spanish versions are forthcoming.

INVEC is an extremely user-friendly relational database program written in Clipper Summer 87 using DBase III Plus database format. INVEC maintains a perpetual inventory record of all Central Medical Store (CMS) items, and tracks purchases and receipts from suppliers as well as issues to health facilities. Although set up to handle the specific requirements of pharmaceuticals, INVEC can manage any type of commodity. Furthermore, the program is designed for easy customisation to suit the needs of a particular user.

The relational database nature of INVEC allows the user to manipulate, combine, and extract information from multiple database files. The process is similar to a manual information system which uses several different record ledgers or files. In a manual system, information can be retrieved from a ledger or file cabinet, then used in whatever task is under way, or to develop a report on CMS operations. INVEC performs equivalent work, except that all of the information is managed by your computer, and INVEC transfers, copies, and reports the information you need. One significant advantage of INVEC is that it can look at many different files at the same time, pulling only the needed information from each and combining it for the user to view on the computer screen or to print as a report.

INVEC's usefulness is dependent on the accuracy of the raw input data, on the timeliness of data entry, and on the commitment of CMS managers to explore its full potential. When the regular maintenance of the INVEC files is a priority, INVEC will reward management with clear, useful information and analyses which are crucial for operations and decision-making.

INVEC is intended to improve information flow and supply management at CMS. INVEC has the following features:

Master Files and Supplementary Data Files

INVEC uses three main database files -- the INVEC Master Files -- which are the essence of INVEC:

- **Inventory Master File** One record for each generic item stocked at CMS. Linked sub-files provide information such as chemical contents, therapeutic alternatives, formulary codes, stock of each item from various suppliers, and tender award.
- **Supplier Master File** One record for each supplier from which products are ordered by CMS.
- **Facility Master File** One record for each facility receiving supplies from CMS.

In each database file, the records are organized like a ledger or spreadsheet, with each record similar to one line or row. INVEC records are composed of data fields, which are similar to the blanks which must be filled in on a form or ledger, or to the cells in each row of a spreadsheet. INVEC steps involve entering data into a field, which is part of a record, which is stored in a database file. New inventory items, health facilities, and suppliers are added to the appropriate file as necessary.

INVEC Procedures to Record CMS Operations

The computer operator uses the **Orders From Facilities** option to enter and process all requisitions from health facilities as they come in. INVEC can be used to allocate quantities of each item, select batches to be shipped, generate picking slips, confirm shipping quantity, print the invoice, and record payments.

Purchase orders to suppliers are generated, printed, and tracked using the **Purchase Order** option. For tender items, INVEC gives the user access to a list of drugs on contract with each supplier. INVEC also tracks each invoice on an "open item" basis as shipments are received and payments made. Multiple currencies may be used simultaneously. INVEC uses a sophisticated, consumption-based method to recommend new quantities to order, taking into account five main parameters (actual delivery time, safety stock required, procurement period for each item, forecast period, and number of stockout days during the forecast period).

All of the options are interactive. When issues are made and purchase orders placed and received, INVEC automatically updates the stock level of the drugs, the transaction history of the health facility, and all financial records, including accounts payable and receivable.

INVEC Reports

INVEC produces a series of 20 standard reports providing information on purchases, receipts, issues, stock adjustment, reorder quantities, and payments. This base figure can be multiplied by the number of specific criteria used with each report. Preset monthly, quarterly and bi-annual reports can be generated automatically. Each report can be generated on the screen or printed, and reports can include graphic presentation of data.

Tendering with INVEC

INVEC manages the tendering process by registering and compiling forecasts from facilities, producing documents for the bidding process, registering quotations sent by suppliers, generating documents for adjudication, registering and listing awards for use in placing orders.

6.8 Training

A large number of storekeepers has already been trained under FHS training programmes. They will need refresher courses with particular reference to the proposed new logistics system and the new MIS (NICARE/INVEC). In addition, fresh training will have to be arranged for those who have not yet been trained. State Family Planning Coordinators and others spoke highly of the training provided by FHS which was confirmed by the generally good quality of records maintained at different levels as well as the overall knowledge of the trained staff about expiry date, stock rotation, proper storage, importance of record-keeping, etc. It will be best, therefore if FHS continue with this responsibility, preferably in collaboration with NEDP. Training should include "training of trainers" with a view to arranging future courses and refresher courses at State/LGA levels.

Training is required also for those involved in MIS, Monitoring, Evaluation and Supervision at different levels. M and E Unit of PHC Division of FMOHHS and has already conducted training courses in the use of NICARE system and should continue with this responsibility.

Training in the use of computers will have to be provided where computers are introduced for the first time and where trained computer programmers are not available.

6.8.1 Proposed Training Activities/Programme

- | | |
|---|--|
| i. F.P COORDINATORS AT LGA LEVEL AND STOREKEEPERS AT STATE, ZONAL AND NATIONAL LEVELS | 3-5 days training in logistics, particularly Maximum-Minimum Inventory Control System, record keeping, warehousing, quality assurance and NICARE and INVEC Systems where this is established (i.e. Federal and Zonal Warehouses) and Cost Recovery Scheme. |
| ii. MONITORING AND EVALUATION OFFICERS: | 5 days training in logistics and monitoring procedures, evaluation, NICARE and INVEC Systems. |
| iii. SFPC, ASST. SFPC | 3 days in principles |

of logistics monitoring supervision, evaluation, NICARE and INVEC, and Cost Recovery Scheme.

iv. OVERSEAS TRAINING AND OBSERVATION TRIPS FOR ASSISTANT DIRECTOR (LOGISTICS) and LMMC

(Not earlier than One year after the new system has taken off)
OBSERVATION VISITS to countries with more advanced FP Programme (e.g. Indonesia, Thailand, Pakistan) with particular reference to sensitization to change and implementing programme growth.

6.8.2 Collaborative Training

Collaborative training with the staff of Essential Drugs Programme is feasible in respect of items i, ii, and iii above, particularly as EDP is employing both NICARE and INVEC systems. Also, EDP training places emphasis on Quality Assurance and Cost Recovery Management.

Where collaboration is routinely employed, it is recommended that an extra day of specialised training be set aside to discuss on-the-job application of relevant principles and procedures to contraceptive management.

6.8.3 Training Needs Assessment

An institutional assessment of training needs, both managerial and technical, should be conducted after the first full year of implementation of the proposed logistic system. The objective should be to determine and synchronise training at all levels (National, Zonal, State, and LGA) and among all cadres of staff so as to design appropriate curricula and methods.

6.9 Quality Assurance and Security of Contraceptive Stocks

Quality Assurance is at present seldom specifically addressed as an element or distinct concern of the contraceptive distribution and logistics management system. In our preliminary review of the Nigerian contraceptive logistics system we could only infer that product

quality was expected to be guaranteed as a requirement of warehousing arrangements and inventory control mechanisms. In our field interviews, operators of the system believed that quality control rested solely on the agencies procuring contraceptives and their own responsibility was mainly to observe the "expiry dates" posted on product packages, and destroy date-expired products from time to time.

But such assumptions break down in the actual day-to-day handling of commodities. Our observation was that wide variations existed in the circumstances of storage, transportation and handling of contraceptives, and in respect of temperature, humidity, physical stacking, little or no ventilation and the absence of air-conditioning. In addition, we were informed of an instance at the Oshodi Central Warehouse of a defective (though unexpired) batch of condoms imported in 1990 and stored there for a longtime under the WHO-sponsored AIDS control project which had to be destroyed because it failed laboratory test. It seems appropriate, therefore, that stricter procedures should be set and observed for quality assurance of products and that operators of the system should be made aware of and more specifically sensitized to quality assurance during training and routine logistics monitoring.

The following suggestions have been variously discussed at the different levels of operation and seem to meet with general agreement.

1. Strict observance of the stipulated conditions for storage:
 - * Warehouse should be properly roofed and ceiling-insulated with corrugated iron-sheet (or other suitable) roofing and asbestos sheets (or other suitable) ceiling;
 - * Cross-Ventilation and ceiling fans should be installed in all stores including in rooms used for working;
 - * air-conditioning should be installed in all Central and Zonal warehouses, and in stores at least of those States which experience high temperature;
 - * stocks should be properly stacked on shelves or on pallets when placed on the floor.
 - * stocks should be arranged to show clearly expiry/manufacturing date to enable the stores officer to easily ensure first-expiry first-out (FEFO) procedure.
2. Strict observance of the stipulated conditions of transportation, including insistence on the use of properly built and covered vehicles for distance travel and for protection of contraceptives from excessive heat and moisture during transportation.
3. Inventory handling and control should be strictly on the basis of FEFO or FIFO (if expiry date is not known).

4. Shipment and Quality Control testing procedures should include the following:
 - i. Pre–procurement factory–tests to be documented and attested by appropriate domestic authorities, and documents to accompany or proceed arrival of goods in Nigeria to meet the requirements of FDAC for port clearance of pharmaceutical products.
 - ii. Port–sampling and Clearance Test to be performed and passed as stipulated for pharmaceutical products entering Nigeria.
 - iii. Monitoring Sampling and Testing to be routinely performed as stipulated:
 - * *mid–life samples* to be drawn randomly from National, Zonal, State, LGA stores and submitted for testing. (Drugs e.g. contraceptive tablets, injections and foam chemicals are tested at the Federal Drug Quality Control Laboratory at Yaba, and condoms are tested at the Condom Quality Control Laboratories at Yaba, Lagos).
 - * Routine *6–monthly samples*, following the mid–life quality clearance, to be drawn and submitted for testing as explained above to obtain continued quality assurance clearance.
5. Strict observance and supervision of destruction of products in accordance with the “guidelines for destruction of products”:
 - * following date–expiry;
 - * as instructed following sample testing and failure.
6. Training of family planning operators at all levels (especially storekeepers, logistics officers and coordinators) to include familiarization and repeated reminders on:
 - * role of quality assurance in the operation of health distribution and logistics systems;
 - * nature (pharmaceutical and /or chemical) of contraceptive commodities and the risk and types of their deterioration;
 - * repercussions of the use of substandard or defective products;
 - * necessary steps that must be taken (routinely or periodically) to protect and guarantee the quality of products;
 - * stipulated conditions and actions for quality assurance under the Nigerian family planning logistics and distribution systems.

6.10 Budget

(First 12 Months 1992/1993)

6.10.1. Staff

(Additional staff and reviewed positions only).

i. Central Office and Warehouse

		₦	₦	₦
	Level	Salary	Allow.	Total
1 X Asst. Dir. (Logistics)	15	17,000	5,100	22,100
1 X LMMC	9	10,000	3,000	13,000
1 X Assist. LMMC	8	8,000	2,400	10,400
1 X Storekeeper / MIS Officer	7	6,000	1,800	<u>7,800</u>
				<u>53,300</u>

ii. Zonal Office and Warehouse

1 X LMMO	9	10,000	3,000	13,000
1 x Assist LMMO	8	8,000	2,400	10,400
1 x STORE KP/MISO	7	6,000	1,800	<u>7,800</u>
				<u>34,200</u>
for 4 Zones: 4 X 34,200				<u>124,800</u>
TOTAL CENTRAL + ZONAL				<u>178,100</u>

6.10.2. Imprest Account/Per Diem

Costs of travel per diem at ₦1000 (accommodation and meals @ ₦700 average cost of fuel and vehicle maintenance repairs ₦300 per day) for 100 field working days per year.

i. Central Office and Warehouse

Provision for 3 travelling Officers:- Assistant Director (Logistics), LMMC and Assist LMMC. It is assumed that Assist. Director (Logistics) will be travelling 50 days/yr. but at

twice the rate:

$$1 \times 50 \times \cancel{\text{N}2000} + 2 \times 100 \times \cancel{\text{N}1000} \qquad \text{N}300,000$$

ii. **Zonal Offices and Warehouses**

Provision for 2 monitoring officers in each Zones: 1 LMMO and 1 Assistant LMMO = 8 monitoring offices in all Zones.

$$8 \times 100 \times \cancel{\text{N}1000} \qquad \text{N}800,000$$

$$\text{Total Imprest for Additional Staff} \qquad \text{N}1,100,000$$

6.10.3. **Vehicles**

i. **Central**

	USD	N
1 Landcruiser	16,500	330,000

ii. **Zonal**

2 Landcruisers per zone for supervision, monitoring delivery

= 2 X 16,500 per Zone	33,000	660,000
For 4 Zones =		2,640,00

iii. **States**

10 Landcruisers for 10 new States	165,000	
7 Landcruisers to replace unservicable old vehicles in 7 States	115,000	
10% to rehabilitate Vehicles in other 14 States (10% of \$16,500 X 14 States)	23,100	
	<u>303,000</u>	<u>6,060,000</u>
Total		<u>N9,030,000</u>

6.10.4 Equipment

	U.S \$	₦
i. FAX		
At \$1000 each		
1 at the Centre and		
4 at 4 Zonal Offices		
5 Fax machines	5,000	100,000
ii. Computers		
At \$3,500 each		
1 at the Centre		
4 at 4 Zonal Offices		
5 Computers	17,500	<u>350,000</u>
Total		<u>450,000</u>

6.10.5 Warehouse Refurbishing

Cost of fixtures and equipments only:-

	U.S \$		₦
	Central	Zonal	
i. A/C's \$500 each	2,000	1,000	
ii. Fire Extinguisher \$50 each	200	100	
iii. Metal Ladder \$100 each	200	100	
iv. Metal shelves	2,000	1,000	
v. Trolley	600	300	
vi. Piling Cabinets	400	200	
vii. Ceiling fans \$50 each	300	200	
viii. Miscellaneous	300	600	
Sub Total	6,000	3,500	
Total (4 Zones)		16,000	
TOTAL Centre + Zones	22,000	=	₦440,000
GRAND TOTAL—All Items (1 to 5)		=	<u>₦11,198,100</u>

7. ROLES AND RESPONSIBILITIES OF THE THREE TIERS OF GOVERNMENT UNDER THE NEW CONTRACEPTIVE DISTRIBUTION SYSTEM

Delineation of roles and the interaction of staff in their day-to-day functioning at the three tiers of Government is critical to harmony and progress. The existing arrangements do not spell out these relationships clearly enough for family planning achievement. Particularly in a country where demographic and political circumstances are changing rapidly (e.g. the creation of new States and LGAs and the increasing focus on Primary Health Care at the LGA/community level), functions of executives and operators must be continually strengthened to accommodate change and give momentum.

Critical risks of disharmony under the present arrangements exist in three areas:

- i. **At the Apex** of the Federal organisation in Lagos, the (usual) bureaucracy and red tape has created doubts in the minds of some state officials about the prospects of a FP distribution and logistics system directed and managed by the Federal Ministry.
- ii. **At the State level**, a vague apprehension is beginning to emerge about the intentions/objectives of "the federals" in respect of State administration of Local Government Areas (LGAs). It is feared that if state supervision and authority are weakened, the development of many LGAs will be stunted by their own limitations (e.g. absence of technical and professional cadres and of appropriate orientation and motivation in many PHC matters, including FP).
- iii. **At the LGA level**, there is an emerging unwillingness to rely on State patronage, although this attitude is at varying stages of development in different States. One LGA Chairman, for instance, offered to collect his contraceptive commodities from the Zonal Office or even from Lagos ("This will be quicker!") instead of from the State FP stores. He was also convinced that the State was too cash-strapped to mobilise the resources necessary for strengthening his LGA.

The proposed distribution and logistics system has addressed these issues with the following strategic provisions:

- i. By adopting a bottom-up consultative and decision-making process with a feedback mechanism, it is hoped that representation and participation of all concerned will be strengthened and mutual confidence at all levels throughout the system will be

sustained/increased.

- ii. By pivoting responsibility for logistics and for additional monitoring and evaluation of LGAs on Zonal Headquarters, it is hoped that this strengthened Federal presence at regional level will be reassuring to both States and LGAs.
- iii. By reinforcing the supervisory resources of States (trained staff, monitoring and communication facilities, imprest accounts, vehicles, computers and fax), it is hoped that States will be better able to support and strengthen their LGAs.

7.1 Proposed Consultative Committees for Assessing Future Contraceptive Needs

i. National Consultative Committee

Membership: Director, PHC; Deputy Director Services; Assistant Director (Logistics); Zonal PHC Coordinator (4); Director NPP, Director NACP, State Representative (2 SFPOs from each Zone on annual rotation); Deputy Director, M & E Unit, Yaba Office; Deputy Director (FDAC), CMD, Oshodi; LMMC; PPFN Representative.

- Assess and collate Zonal and State contraceptive forecasts.
- Compile National contraceptive requirements and place orders.

ii. Zonal Consultative Committee

Membership: Zonal PHC Coordinator; FP Coordinators of States within the Zone; LGA Representatives (LGA FP Coordinator from two LGAs per state on annual rotation); Zonal LMMO; PPFN Representative.

- Assess and collate State and LGAs contraceptive forecasts
- Compile Zonal contraceptive requirements and forward to National Consultative Committee.

iii. State Consultative Committee

Membership: State PHC Director, SFPC; Assistant SFPC, all LGA FP Coordinators, State sub-zonal FP Coordinator (where applicable), selected FP Service Provider (one Service Provider per LGA on annual rotation); PPFN Representative.

- Assess and collate contraceptive forecasts and requirements for LGAs and component SDPs and forward to Zonal Coordinator with copies to all LGAs.

- Collate and forward to Zonal Coordinator contraceptive requirements of FHIs within the State.
- Compile State contraceptive requirements and forward to Zonal Consultative Committee.

iv. **LGA Consultative Committee**

Membership: LGA Administrator, (Chairman); LGA FP Coordinator; all LGA Clinics and SDPs providing FP services; one representative of VHWs; representatives of other PHC programmes (LGA Coordinators of EPI, EDP and CDD).

- Assess and collate contraceptive requirements of the LGA and its component SDPs and forward to State Consultative Committee.

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8. OPTIMISING THE USE OF AVAILABLE RESOURCES

8.1 Issues

The proposed logistics system has provided for resources to strengthen capacities in several areas. In addition, provision has been made for strategic capacity strengthening by providing for safety stocks at State and Zonal stores with due cognizance for necessary lead times. Supervision and bureaucratic authority is being strengthened at National, and Zonal levels.

At the Zonal level, the Zonal PHC Coordinator and his staff, will have additional responsibilities for special assistance to new States and for identifying and helping weak or troubled LGAs. This arrangement has two important advantages. Firstly, by strengthening the Zonal Headquarters and pivoting regional distribution and monitoring on Zonal Coordinators, any slowing effects of bureaucracy at the Lagos apex body are reduced. Secondly, by giving Zonal Coordinators and their staff additional direct responsibility for monitoring LGAs and identifying the weak or troubled ones for direct support from the Zonal Headquarter, the vexing issue of LGAs not always receiving the needed support or supervisory attention from states is addressed.

Also, staff movement, a critical constraint at all levels at present, is being aided by providing for vehicles or their resuscitation where those previously provided have broken down and are awaiting repairs. Essential back-ups for travelling, repairs and staff expenses are also being provided through the establishment of an "imprest fund" for these purposes. The imprest fund will be based within the Family Planning Units at State and LGA levels and at PHC/Family Planning departments at Zonal and National levels.

Also recommended is a scheme for optional cost recovery which will provide guidelines and standards for States. States operating successful cost recovery schemes will be able to replenish and revolve their contraceptive imprest funds from this source, thereby guaranteeing their sustenance and that of the activities to which the funds are applied.

NGO and Private Sector resources are available to the FP programme without any direct cost to the Government. By supporting and encouraging these two sectors, their contribution to Family Planning can be significantly increased. This can be, for example, in the form of Community Based Distribution (CBD) of contraceptives by NGOs and encouraging social

marketing of oral pills, foam tablets in addition to condoms through the Private Sector.

8.2 Optional Cost Recovery Scheme

Less than 50% of States charge for contraceptives. Charges are in all cases marginal, being far below the actual cost of products. The reasons given for introducing the charges include the need to cover incremental costs such as the costs of cotton wool, antiseptics and other medical “consumables” associated with contraceptive services like IUD insertions. It is also said that the payments create a sense of value for products in clients. Although the number of users may drop slightly at the time of introducing charges, the experience has been that there is soon a steady recovery. Staff and indigent clients are usually exempted from payment and “nobody is denied service because of inability to pay.”

States that do not presently charge for commodities are apprehensive that cost recovery might discourage users and new acceptors, and may result in financial abuses. In the alternative, some States (e.g. Kano) ask clients to contribute to buy cotton wool, antiseptics, etc, needed for their contraceptive clinical services. These States do not, however, rule out the possibility or necessity of introducing small charges at a later date. A number of states say they are awaiting directives/guidelines on Cost Recovery from the FMOHHS.

The Median Range of Current Charges is as follows:

	Low	High
	₦	₦
Oral Pills	1.00 per cycle	2.00 per cycle
Condoms	10K per piece	25K per piece
Foaming tablets	10K per tablet	25K per tablet
IUD	1.00 per insertion	5.00 per insertion
Injectable(s)	1.00 per injection	5.00 per injection

There is need to evolve a policy that will protect the integrity of cost recovery and set guidelines for its introduction. The premises for such a policy should include the following:

1. Cost recovery should be optional.
State FP leaders should decide when Cost Recovery should be introduced.
2. Cost recovery, once introduced, should follow federally stipulated guidelines.

3. Prices charged should fall within a pre-set minimum—maximum range.
4. Exemptions must be based on approved criteria e.g. FP Clinic staff and those who genuinely cannot afford to pay.
5. Money collected should be apportioned among Clinic, LGA and SFPC at stipulated rates e.g 25% each for Clinic and LGA and the remaining 50% for SFPC. The money so collected must be used only for Family Planning activities through an Imprest Account arrangement.
6. Losses must be within an overall maximum quantity of commodities by value inclusive of pilferage, breakages and free samples.
7. Receipts must be fully accounted and monitored at two separate levels:
 - i. SDP or clinic level, and
 - ii. SFPC or departmental level
8. A Master Control Ledger should be used for reconciliation with periodic physical inventory.
9. Disbursement of funds must be strictly as approved, e.g. % disbursement to clinic, LGA and state FP Department imprests.
10. Training for Cost Recovery should include
 - i. introductory training to prepare Service Providers for the requirements of the programme, and
 - ii. on job training from time to time.

8.3 **Evaluation of Existing Free Standing Distribution Systems for Integration**

8.3.1 **EPI Distribution System**

Under UNICEF/FMOHHS distribution system for EPI, *flow* and *availability* are inter-dependent and sacrosanct. Flow is maintained by an unbroken "cold chain" which must be scrupulously maintained from Zonal warehouse through state and LGA stores to Service Delivery Points. The most critical distribution issue is the need for constant availability of vaccines at the LGA level and below. In 1982, the absence of cold chain security at this level led to the collapse of the EPI distribution system. Kerosene-operated "cold boxes" had to be introduced, and carried by motor cycles, bicycles and boats to peripheral health centres.

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In 1989/90 the LGA-based radial *outreach strategy* was introduced. Under this system, a kerosene-operated mini-cold store is established at an LGA centre-point from which staffers in surrounding health centres withdraw cold boxes of "vaccine carriers" to service village outreach points on a daily basis. They go out in the morning and return in the evening. In this way virtually 100% coverage has been achieved.

The EPI operation is judged to be a "success story" by most observers. However, its intricate logistics system is almost "water-tight" and FP commodities can not be hooked unto this system for the following reasons:

- i. the technical requirements of "cold chain" do not apply to FP commodities. For example, cold boxes have to be replenished with vaccines every week.
- ii. FP has a totally different social context from vaccines and views of the two commodities are sometimes contradictory.
- iii. EPI logistics and close monitoring systems are programme-specific. Zonal stores and model states are different from those other PHC programmes.
- iv. EPI accounting is also programme-specific.
- v. EPI has enjoyed priority input of resources and political support over other PHC components (viz EDP, CCCD, and FP) and has thereby achieved a more advanced state of development.

It is possible, however, to couple contraceptive and vaccine distribution at the most peripheral level, i.e. at SDP stores and volunteer VHWs, when FP products could be "dropped" for families during EPI calls—with or without FP canvassing. More importantly, lessons for FP logistics and distribution from the EPI programme could be valuable. *Availability* and *flow* are interdependent and an adequate and steady supply of contraceptives to state and LGA stores should be maintained by strengthening Zonal Warehouses. Logistics support at LGA level for servicing SDPs and obtaining information from them is critical for sustaining service and expansion.

While the EPI distribution system is perceived as adequate and cost-effective, it is specialised and programme-specific and cannot readily be adapted to respond to increasing supply of contraceptives under the NPP. It is, however, possible that distribution of contraceptives and vaccines could be coupled at the most peripheral level, that is, at SDPs and in the hands of village health workers.

8.3.2 EDP Distribution System

A coordinated distribution system for Essential Drugs does not exist. Rather, different systems of drug distribution and logistics exist at primary, secondary and tertiary levels. At the tertiary level FHIs from all over the country collect their requirements from the CMS at Oshodi. At the secondary level, States arrange their own indents by direct tender and subsequently distribute to state health facilities. Similarly, at the primary health care level, LGAs arrange their own procurement and supplies are collected by SDPs from their store. However, deliveries are made only in emergencies.

EDP does however have *standard procurement* guidelines applicable to all levels of health care. Suppliers of drugs are prequalified at Federal level in accordance with World Bank-approved International Competitive Bidding (ICB) guidelines by a Central Drug Procurement Unit (CDPU). The lists of prequalified suppliers are made available to Federal authorities and to individual states for use in tendering for drugs.

This arrangement provides important security assurances and lends economy to the procurement process. Also, the procurement guidelines themselves lend credibility to drug procurement even where, as in most LGAs, drugs are procured by local purchase orders (LPO). FP procurement could certainly profit from similar arrangements if and whenever the need arises to indent for short falls in contraceptives supplied by donor agencies.

FHIs: the prospect of blending contraceptive distribution with drug distribution for FHIs was closely examined. Contraceptives needed by FHIs (teaching and special hospitals, other parastatals and the Armed Forces) are at present collected by them directly from state family planning stores in their area. In a few instances, especially military, the requirements are supplemented from NGO sources. The arrangement has worked satisfactorily and state coordinators say that they have no problems receiving accounts and reports for items supplied. FHI pharmaceutical stores could conceivably take over the storage of contraceptive commodities meant for FHIs, but they will need to keep separate accounts for such items and, in most cases, physically separate them from stocks of drugs. At this stage of FP development, this approach will be awkward because (1) relatively small quantities of FP commodities are involved when compared to drug inventories, (2) drugs operate standard cost-recovery schemes which do not at present apply to contraceptives (3) accounting books and procedures for drugs must be separated from those for contraceptives and (4) pharmacists-store keepers of drugs are not always available to service family planning units

under joint storage arrangements.

The present distribution system for drugs is not coordinated for the three tiers of health care delivery and cannot, therefore, serve to improve the flow of contraceptives. At the tertiary level, where FHI contraceptive needs could possibly be stored with drug inventories, such arrangement would be premature in light of separate accounting and inventory control procedures that will be needed for comparatively small stocks of contraceptives. Lessons can however be learned from the standard procurement practices of the essential drug programme if and when the need rises to indent for shortfalls in contraceptive commodities supplied by donor agencies.

8.4 Utilising NGO and Private Sector Resources

8.4.1 NGO Resources

By far the most notable NGO is the PPFN which claimed a total of 101,467 acceptors in 1991 (48,440 of them new), a 60% increase over its 1990 figure of 60,924 cases. Oral and injectable forms were each adopted by 33.3% of clients. About 1.2 million people in the reproductive age group (1.35% of total population) were said to have been reached with I.E.C in 1990. The volunteer-based PPFN has 80 clinics in 24 states nation-wide, and operates strictly on cost-recovery basis (10-15% recovery to cover distribution costs) for all items except sterilization which is free. The activities of PPFN are however mostly confined to urban areas, leaving the vast rural peripheries virtually untouched.

8.4.2 Private Sector

Social marketing through the Private Sector is in its infancy. Sterling's seven year old involvement with FPIA is considered an act of "social responsibility" by Sterling with a recent (since 1991) limited media push and a secondary marketing organisation for condoms which is piggy-backed on the company's pharmaceutical commodities distribution. Even for this low level of commercial activity, there have been problems with supply and availability. A condoms sales target of 5 million pieces in 1991 was only 80% achieved.

APPENDIX 1

SUGGESTED TIME SCHEDULE For Starting Operations By October 1, 1992

Preliminary Activities (After June 22, 1992)	Last Date for completing action	Period in days (since June 22, 1992)
1. Decision on the recommendations of the report	July 1, 1992	8 days
2. Inform FHS/USAID of Govt. Decision	July 1, 1992	8 days
3. Award contracts for refurbishing Central and Zonal Warehouses	July 1, 1992	8 days
<hr/>		
Activities After Acceptance of the Report	July 1, 1992	Since July 1, 1992
1. Appoint Assistant Director (Logistics); LMMC; Asst. LMMC; Zonal LMMOs; Asst. LMMOs (Zonal); Central and Zonal Stockkeeper/MIS Officer	July 15, 1992	15 "
2. Check progress of warehouses refurbishment	July 20, 1992	20 "
3. Engage a short-term Nigerian Consultant to assist Asst. Director (Logistics)	August 1, 1992	30 "
4. Review with concerned officers/ Donor Agencies: i. Current stocks of contraceptives in SPNL/SFPC/LGA Stores; ii. those on order and additional quantities needed to get the new logistics system started, including delivery schedule; iii. training needs of Storekeepers and Monitoring Officers, including schedule of courses; iv. identify trainees and trainers; v. review requirements of vehicles and MIS/Monitoring forms.	August 1, 1992	30 "
5. Central and Zonal Warehouses to be ready to receive stocks of contraceptives and fully refurbished as per contract.	August 1, 1992	30 "

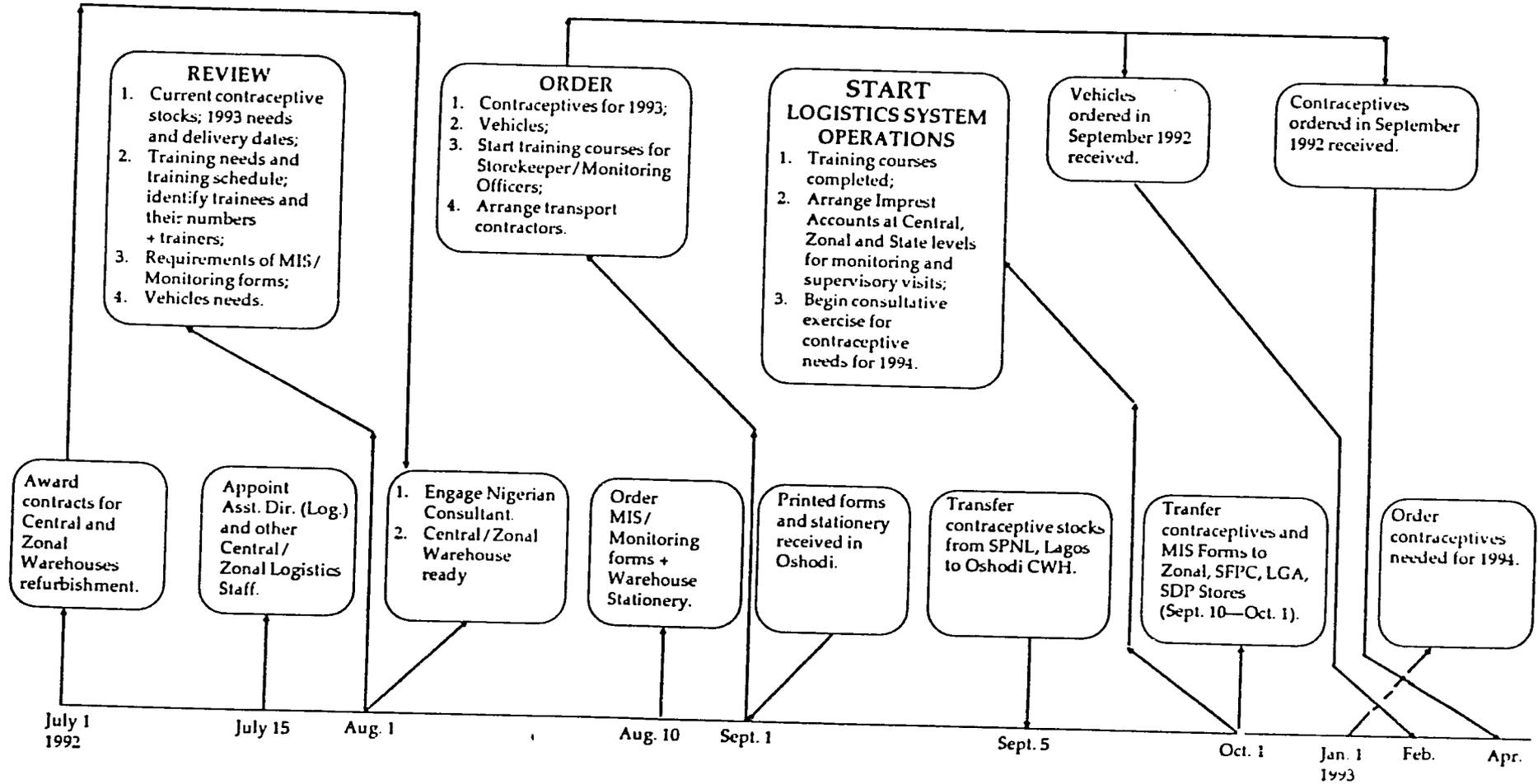
6. Order printing of required quantities of all MIS and Monitoring Forms and other warehouse stationery (bin cards, stock registers etc.)	August 10, 1992	40 ..
7. Order Contraceptives for 1993	September, 1992	60 ..
8. Order Vehicles	September 1, 1992	60 ..
9. Arrange Transport Contractors	September 1, 1992	60 ..
10. Begin Training Courses for Storekeepers/ Monitoring Officers.	September 1, 1992	60 ..
11. Printed MIS and Monitoring Forms received in Oshodi	September 1, 1992	60 ..
12. Transfer contraceptives from SPNL, Lagos to Central Warehouse, Oshodi	September 5, 1992	65 ..
13. Complete transfer of required contraceptives and MIS/Monitoring Forms from Oshodi to Zonal PHC Warehouses	September 10, 1992	70 ..
14. Complete transfer of required contraceptives from SPNL Depots in States and from Zonal PHC Warehouses to SFPC Stores	September 20, 1992	80 ..
15. Complete transfer of required contraceptive and MIS Forms from SFPC Stores to LGA Stores/SDPs	October 1, 1992	90 ..
16. Arrange Imprest Accounts at Central, Zonal and State levels for monitoring and supervisory visits	October 1, 1992	90 ..
17. Begin the First Consultative Contraceptive Forecasting Exercise	October 1, 1992	90 ..
18. Complete Consultative Exercise and determine contraceptive requirements for 1993, 1994, 1995	December 31, 1992	180 ..
19. Place orders for contraceptives required for 1994	January 1, 1993	

APPENDIX 2

CRITICAL PATH SCHEMATIC

(July 1, 1992—October 1, 1992)

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NOTE: This chart indicates the time frame within which each activity should be completed for the new logistics system to become operational by October 1, 1992. If the assumptions about the time needed for each activity are considered optimistic, necessary adjustments should be made and the time frame revised accordingly.

- | x. Has | Sufficient | Not Sufficient |
|--------------------|--------------------------|--------------------------|
| Pallets: | <input type="checkbox"/> | <input type="checkbox"/> |
| Racks and Shelves: | <input type="checkbox"/> | <input type="checkbox"/> |
| Ladder: | <input type="checkbox"/> | <input type="checkbox"/> |
- xi. Are there any signs of water leakage/damp on walls/floor?:
- xii. Are Inventory Control Cards/Bin Cards/Stock Register up-to-date?:
- xiii. Is FEFO practised?:
- xiv. Is one single person responsible for issuing contraceptives?:
- xv. Overall, meets minimum warehousing standards?:

7. Contraceptive Availability

- i. Have the stocks of all contraceptives since the last visit been adequate?:
- ii. If not, give contraceptives in short supply and periods of shortage/stockouts:
- iii. Is Maximum—Minimum Inventory Control System being followed?:
- iv. Are supplies being requisitioned regularly at stipulated intervals and are received undamaged and in full?:
- v. When were the last two consignments received?
(Give dates of receipt)

8. **Contraceptive Stock**

	Closing Stock on date of visit		Avg. Monthly Use	Expired Stock (Give details)	Stocks Expiring in next 6 months
	As per Stock Register	Actual Stock			

- i. Oral Pills (cycles)
- ii. Copper-T (pieces)
- iii. Condoms (pieces)
- iv. Foam Tablets (tablets)
- v. Depoprovera (doses)
- vi. Noristerat (doses)
- vii. Other

9. **Trends in Contraceptive Use**

	No Change	Increasing (+ or ++ or +++)	Decreasing (- or -- or ---)
--	-----------	--------------------------------	--------------------------------

- i. Oral Pills
- ii. Copper-T
- iii. Condoms
- iv. Foam Tablets
- v. Depoprovera
- vi. Noristerat
- vii. Other

10. **Availability of MIS Forms**

- i. Are all stipulated MIS Forms available?:
- ii. If not, which forms are not available?:
- iii. Since how long?:
- iv. What action is being taken to get the missing forms?:

11. Reporting

- i. The last month for which required reports have been submitted:
- ii. Are there any reports outstanding?:
- iii. If yes, a) since how long?:
b) which months?:
- iv. What action is being taken to get the missing reports?:
- v. What action is being taken to ensure regular and timely submission of reports in future?:

12. General Comments and Observations

(e.g. Quality Assurance, signs of deterioration before expiry date, incidences of leakage, disposal of expired contraceptives etc.)

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APPENDIX 4

JOB DESCRIPTION

TITLE: ASSISTANT DIRECTOR (LOGISTICS)

DUTY STATION: LAGOS

SUPERVISOR: DEPUTY DIRECTOR (PHC SERVICES)

DUTIES AND RESPONSIBILITIES

1. Oversee the entire Public Sector logistic system for PHC Services with particular attention to contraceptive and essential drugs programmes.
2. Co-ordinate and initiate timely annual procurement and port clearance of contraceptives and essential drugs for the National programmes with International Agencies, FDAC, NPP, NACP and other concerned agencies.
3. Co-ordinate and initiate timely commencement and completion of yearly consultative exercise for determining National contraceptive requirements based on LGAs, States and Zonal forecasts.
4. Liaise with Zonal, State and LGA officers to ensure proper functioning of the entire logistics system and uninterrupted availability of contraceptives at each level, making such modifications in inventory levels and in procedures and practices for requisitioning, issuing and distributing contraceptives as may be necessary.
5. Co-ordinate and oversee Logistic Management Information System, particularly the functioning of NICARE and INVEC systems.
6. Initiate appropriate training programmes for Logistics, MIS and Monitoring officers at all levels.
7. Take steps to integrate the distribution on contraceptives with that of essential drugs to the extent possible.
8. Ensure maintenance of required Quality Assurance standards and procedures and be responsible for their enforcement at all levels.

TITLE: LOGISTIC MANAGEMENT AND MONITORING COORDINATOR
DUTY STATION: LAGOS
SUPERVISOR: ASSISTANT DIRECTOR LOGISTICS

DUTIES AND RESPONSIBILITIES

1. Assist ASSISTANT DIRECTOR LOGISTICS in his/her assigned duties.
2. Regularly review contraceptive stock levels in the Central Warehouse at Oshodi and maintain required stock levels of all items.
3. Ensure uninterrupted availability of contraceptives at Zonal and State levels through adequate and timely supplies.
4. Arrange for the transport of contraceptives through private commercial transport companies at least once every quarter in order to ensure adequate stock levels in Zonal/State Warehouses.
5. Undertake frequent and regular field visits to:
 - i. Monitor inventory levels of Zonal and State Warehouses and LGA/SDP stores in order to prevent shortages and stockouts
 - ii. Monitor the flow of contraceptives between different levels to ensure that quantities issued and received match at each level.
 - iii. Monitor storage of contraceptives at Zonal, State and LGA levels and ensure maintenance of proper standards.
 - iv. Ensure maintenance of required Quality Assurance Standards and Procedures at Zonal, State and LGA levels.

TITLE: ASSISTANT LOGISTICS MANAGEMENT AND MONITORING
COORDINATOR

DUTY STATION: LAGOS

SUPERVISOR: LOGISTICS MANAGEMENT AND MONITORING
COORDINATOR

DUTIES AND RESPONSIBILITIES

1. Assist Logistics Management and Monitoring Coordinator in his/her assigned duties.
2. Undertake frequent and regular field visits to:
 - i. Monitor inventory levels of Zonal and State Warehouses and LGA/SDP stores in order to prevent shortages and stockouts.
 - ii. Monitor the flow of contraceptives between different levels to ensure that quantities issued and received match at each level.
 - iii. Monitor storage of contraceptives at Zonal, State and LGA levels and ensure maintenance of proper standards.
 - iv. Ensure maintenance of required Quality Assurance Standards and procedures at Zonal, State and LGA levels.
3. Undertake such other assignments as may be directed by Assistant Director (Logistics) and/or LMMC.

TITLE: LOGISTICS MANAGEMENT AND MONITORING OFFICER
(LMMO).

DUTY STATION: ZONAL HEADQUARTERS (Bauchi, Enugu, Ibadan, Kaduna)

SUPERVISOR: Zonal PHC Co-ordinator

DUTIES AND RESPONSIBILITIES:

1. Regular review stock levels of contraceptives in Zonal Warehouse and requisition supplies from the Central Warehouse at Oshodi at least once every quarter to ensure proper functioning of the logistics system.
2. Ensure uninterrupted availability of contraceptives at State and LGA levels through adequate and timely supplies.
3. Arrange for the transport of contraceptives to State warehouses through private commercial transport companies at least once every quarter in order to ensure adequate stock levels in States/L.G.As warehouses.
4. Make spontaneous direct supplies to LGAs in an emergency situation under advice to and where possible, after consultation with SFPC.
5. Ensure timely and proper flow of logistics and programme performance information between different levels (National, Zonal, State, LGA, SDP) for proper functioning of MIS and Logistic systems.
6. Undertake frequent and regular field visit to:
 - i. Monitor inventory levels in zonal and state warehouses and LGA/SDP stores in order to prevent shortages and stockouts
 - ii. Monitor the flow of contraceptives between different levels to ensure that quantities issued and received match at each level.
 - iii. Monitor storage of contraceptives at Zonal, State and LGA levels and ensure maintenance of proper standards.
 - iv. Ensure maintenance of required Quality Assurance standards and procedures at Zonal, State and LGA levels.
7. Undertake such other assignments as may be directed by the Zonal PHC Coordinator from time to time.

TITLE: ASSISTANT LOGISTICS MANAGEMENT AND MONITORING OFFICER (ALMMO)

DUTY STATION: ZONAL HEADQUARTERS

SUPERVISOR: LMMO

DUTIES AND RESPONSIBILITIES

1. Assist LMMO in his assigned duties
2. Undertake frequent and regular field visits to:
 - i. Monitor inventory levels in Zonal and State Warehouses and LGA/SDP stores in order to prevent shortages and stockouts
 - ii. Monitor the flow of contraceptives between different levels to ensure that quantities issued and received match at each level.
 - iii. Monitor storage of contraceptives at Zonal, State and LGA levels and ensure maintenance of proper standards.
 - iv. Ensure maintenance of required Quality Assurance standards and procedures at Zonal, State and LGA levels.
3. Undertake such other assignments as may be directed by the Zonal PHC Coordinator and/or LMMO.

TITLE: STOREKEEPER/MIS OFFICER

DUTY STATION: CENTRAL WAREHOUSE at Oshodi; ZONAL WAREHOUSES at Bauchi, Enugu, Ibadan, Kaduna.

SUPERVISOR: ASSISTANT DIRECTOR (Logistics) for Central Warehouse; ZONAL PHC COORDINATOR for Zonal Warehouses.

DUTIES AND RESPONSIBILITIES

1. Properly receive, store, and deliver contraceptive commodities and other supplies, according to specified procedures.
2. Establish and keep up to date the following and other required forms.
 - i. Invoice
 - ii. Receiving Report
 - iii. Requisition/Issue Forms
 - iv. Stock Record Card/Register
 - v. Delivery Voucher
 - vi. Bin Card
 - vii. Stock Replenishment Request
3. Maintain proper logistics and inventory records including all data under NICARE and INVEC computerised information systems, and submit required information regularly and in time as stipulated.
4. Liaise with Zonal/State/LGA Storekeepers, as required, and ensure maintenance of adequate stocks of contraceptives in Central/Zonal Warehouses and State/LGA Stores as stipulated under the Maximum—Minimum Inventory Control System, and requisition additional supplies as needed to achieve this.
5. Make spontaneous supplies, in consultation with concerned Zonal/State Officers, to Zonal/State/LGA Warehouses/Stores, whenever necessary, in order to maintain required inventory levels and to avoid shortage/stockouts.
6. Supervise and guide the work of other staff involved in storekeeping and in maintaining warehouse records.
7. Maintain efficiency within the warehouse by promoting good working practices, by proper control of staff, stock and information, and by ensuring adequate training of staff.
8. Ensure maintenance of required Quality Assurance Standards and procedures for all stocks.

APPENDIX 5

PERSONS CONTACTED

A. Federal Ministry of Health and Human Services, Lagos:

Professor Olikoye Ransome-Kuti, The Hon. Minister of Health and Human Services
Dr. Adenike Adeyemi, Assistant Director, PHC
Dr. A. Tilley-Gyado, NACP Coordinator
Dr. Pauline Otti, Deputy Director I.E.C., FMOHHS Population Division
Dr. Bamigbose, Population Division
Dr. (Mrs) Afolabi, Family Planning Services Population Division
Mrs. O. Omosaiye, Coordinator, Essential Drugs Programme
Mr. A. O. Ayanbeku, Essential Drugs Programme
Mrs. Aburime, Essential Drugs Programme
Mrs. V. Said, Essential Drugs Programme
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Mrs. J.C. Onwundijo, Assistant Director (FDAC), CMD, Yaba
Mr. A.U. Uwah, Officer In-Charge, Condom Quality Control Laboratory, Yaba
Mrs. Bassey Udota, Coordinator Bamako Initiative

B. Family Health Services (USAID), Lagos

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Dr. Ifeanyi Ibe, Commodity Logistics Coordinator
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Miss. Rekiya Atta, Computer Analyst, CCCD
Dr. Robert J. Timmons, FHS Consultant for NICARE
Mr. Thom Graziano, Programme Analyst, FHS Consultant for INVEC

Sterling Products (Nigeria) PLC, Ilupeju, Lagos

Mr. Govind Agrawal, Regional Vice President, West Africa
Otunba S.T. Olanipekun, Materials Manager

C. United Nations Population Fund (UNFPA), Lagos

Dr. Fidelis Zamachi, International Programme Officer
Dr. Babs Sagoe, National Programme Officer

D. The World Bank, Lagos

Dr. Esther Boohene, Senior Population Advisor
Mr. Dave Radel, West Africa Regional Director (Washington D.C)

E. UNICEF, Lagos

Dr. Valerian P. Kimati, Senior Programme Officer

F. Planned Parenthood Federation of Nigeria (PPFN), Lagos.

Mr. G.C. Ezeogu, Acting Regional Director

G. Association of Voluntary Surgical Contraception (AVSC), Lagos

Dr. Ade A. Adetunji, Programme Manager

H. Field Staff

Zone A

Enugu

Dr. Jones Utuks, Zonal PHC Coordinator
Mrs. Rebecca E.N. Ugwu, Enugu State FP Coordinator
Mrs. Egboh, Enugu State Deputy State Coordinator
Mrs. Okechi, Enugu State FP I.E.C. Officer

Port Harcourt

Dr. Israel Kue, Hon. Commissioner for Health, Rivers State
Dr. F.E. Korubu, Director, Public Health, Rivers State
Mrs. Gloria Urombo, State Family Planning Coordinator Rivers State
Mrs. H.I.B. Kua, Deputy State Family Planning Coordinator
Hon. David T. Briggs, Chairman, Akuku-Toru LGA (Abonema)

Dr. Young-Arney, Medical Officer/PHC Coordinator, Akuku-Toru LGA (Abonema)

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Ibadan

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Mrs. M.O. Olugbode, Oyo State FP Coordinator

Mrs. M.M. Ojdiran, FHS Commodities Logistics Officer

Dr. Pascale Fritsch, UNICEF EPI Coordinator Zone B

Mrs. A. Agboola, PPFN State Clinic Officer, Oyo State

Mr. Segun Adegboye, PPFN Finance Officer, Oyo State

Mr. Anthony Amusa, Sterling Products Storekeeper, West Territory

Akure

Dr. Adetula, Ondo State PHC Director

Mrs B.O. Omoyajowo, Ondo State FP Coordinator

Mrs. O. Fatukasi, FP Storekeeper/MIS Officer, Ondo State

Owo

Mrs. C.A. Omole, LGA FP Coordinator

Zone C

Kaduna

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Mrs. Rhoda Laah, State FP Coordinator

Mrs. Biddam, Kaduna South LGA FP Coordinator

Mrs. Ibrahim, Kaduna South LGA FP Assistant Coordinator

Mrs. Aishat Abubakar, FHS/Pathfinder Zonal Programme Officer

Alhaji I. Uthman, Sterling Products Territorial Manager, North

Mr. Uche Ekenna, FPIA Zonal Programme Officer

Katsina

Dr. Jabir Mohammed, Director PHC, Katsina State

Alhaji Mustapha Imam, Director Pharmaceutical, Services Katsina State

Mr. Lawal Sule Kuro, Chief Pharmacist, Katsina State

Mr. Atukur Malami, Pharmacist, Medical Stores, Katsina

Mr. S. Abu, Pharmacist, Medical Stores, Katsina

Zone D

Bauchi

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Mr. Mohammed Ahmed, Director General, MOH, Katsina State
Mr. C.M. Maina, PHC Coordinator Bauchi State
Mrs. P. Dogo, State FP Coordinator
Mrs. Hajara Dauda, Principal Nursing Sister, Bauchi State Clinic
Mrs. Juliana Nathaniel, Sister-in-Charge, Bauchi Specialist Hospital
Mrs. Christiana Waziri, State Sub-zonal FP Coordinator
Mr. Malam S.B. Baba, State PPFN Manager
Mr. Dauda Bangali, Former UNFPA Zonal Programme Officer
Mr. Roger Wright, UNICEF Zonal Director

Jos

Dr. (Mrs) Alti C. Zwandor, Director General, Plateau State MOH
Mrs. Susan Aina, Plateau State FP Coordinator
Mr. Ahmed M. Konga, Plateau State EPI Coordinator
Mr. Haruna, Deputy Director, Pharmaceutical Services, Plateau State
Mrs. Ruth N. Niyang, FP Storekeeper/MIS Officer, Plateau State

Kano

Dr. D. Mohammed, Kano State PHC Director
Dr. Mahamadu Buhari, Kano State Deputy PHC Director
Mrs. A.A. Bala, State FP Coordinator (Human Health Reproductive Programme)
Alhaji Abubakar Abdulahi Gwarzo, Nassarawa LGA, PHC Coordinator (MCH/FP)

Maiduguri

Dr. Bashir Umar, Borno State PHC Director
Mrs. Hauwa S. Mohammed, Borno State FP Coordinator
Mrs. Zana Gambo, Borno State Assistant FP Coordinator
Mrs. Kucheli Gurkwa, Clinic Storekeeper
Mrs. K. Bitrus, F.P. Storekeeper/Logistics Officer
Alhaji Modu Suguli, Maiduguri Metropolitan LGA PHC Coordinator
Mrs. F. Kadai, Maiduguri Metropolitan LGA MCH/FP Coordinator
Mrs. K. Musa, Service Provider, Maiduguri Specialist Clinic

APPENDIX 6

CONSULTANTS' TERMS OF REFERENCE

GENERAL

1. To review the existing free standing distribution system run jointly by UNICEF and FMOH and its adequacy and cost effectiveness to respond to increasing supply of contraceptives under the National Population Project.
2. To review the existing demand forecasting and procurement system and suggest alternatives for most effective system for procurement which ensures regular supply of contraceptives at most economical prices.
3. FMOH and few states are already in the process of computerizing inventory management and stock control for essential drugs. To assess the feasibility of blending in contraceptives inventory control with the existing system or identify the need for a separate departmental set up at PHC Services Division.

BUILDING/STRENGTHENING INSTITUTIONAL CAPABILITY

1. To examine the feasibility of setting up a contraceptive monitoring unit in the central office (PHC Services Division), responsible for demand collection, data analysis for consumption trends, procurement, coordination, distribution and monitoring.
2. To review the need for a computerized system for collection, analysis and interpretation of client records to establish consumption trend and future procurement planning.
3. Review the existing data collection system at various levels, its adequacy and suggest any changes, modifications or improvement in the existing forms or data collection procedures to ensure efficient reporting and maximum compliance.
4. With special reference to F.H.Is., to examine the feasibility of using the drug distribution system being set up under essential drug project for contraceptive distribution also.
5. Review the existing FMOH training programs under Essential Drug logistics and field supervision and whether Family Planning staff could also be included in the scheme and to identify if there is any need for any specialized training modules to be included in the existing training formats.
6. In case a unified drug logistic system to supply drugs and contraceptives emerges as

the most effective option, to identify the well defined functional relationship between the central PHC Service Division and federal /state medical stores. In case free standing system is the best option, to prepare job descriptions for various categories of personnel engaged in procurement, demand assessment and distribution.

7. Review existing distribution channels and come up with comprehensive recommendations which should include any alternative distribution networks and the cost involved in maintaining such channels. In addition to examine the feasibility of using drug distribution channels in public and voluntary sectors for contraceptive distribution.
8. Specify the roles of the three levels of government (Federal /State /LGA) for operating the system e.g, where the responsibility of one level ends and the next level begins.

Transportation

Review the transportation systems in use. Come up with recommendations on efficiency and cost-effectiveness of either privatization of the transportation of contraceptives from national level to various outlets or the use of public sector transport along with the current drug distribution system.

Storage Facilities

Storage facilities for drugs, vaccines etc. are available and are being upgraded at federal, zonal and LGA level in most places under Essential Drugs Project and Health System Fund Project. To assess the feasibility of using the existing facilities and to review the need for alternative channels including contraceptive depots. Assess the additional requirements and cost implication of such alternatives.

Steps required to ensure safety, security and stability of contraceptive stocks.

APPENDIX 3

Contraceptive Logistics System Report

FHS Stand on the Recommendations

1. Forecasting and Procurement

FHS will continue to assist in forecasting through provision of technical assistance and through mounting training programs for forecasting, and helping to determine commodity requirements at each level. (It is planned that in late Sept/early October, Brice Atkinson and Tim Johnson will visit Nigeria to develop with the government the contraceptive procurement tables for USAID-financed commodities for 1993 and to make preliminary plans for future year requirements.

2. Distribution and Warehousing

FHS is already committed to funding the refurbishment of the central and zonal warehouses.

3. Inventory Control

FHS agrees with the Maximum-Minimum Inventory Control system and will provide technical assistance and training in its adoption.

4. Transportation

FHS agrees that commercial transportation for contraceptives is the preferred alternative for commodity distribution to zonal and state warehouses.

5. MIS

FHS will continue to provide technical assistance and training in NICARE and looks forward to the integration of INVEC in the MIS system, which it will support through technical assistance and training.

6. Computerization

FHS agrees that computerization should follow and not precede the establishment of a reliable and functional manual system of data management. Once a satisfactory manual system of data management is established and fully functioning, FHS would consider the provision of necessary equipment for better storage, analysis and quick transmission of data.

7. M&E

FHS will continue to support the M&E unit of the PHC Department in its monitoring and evaluation of the family planning program.

FHS agrees that mobility of monitoring officers is essential and that the establishment of imprest accounts at the central, zonal and states levels is necessary. FHS will continue to work with the FMOH to find ways to strengthen this vital area.

8. Staffing

FHS agrees that staffing at the central and zonal levels has to be strengthened by additional staff.

9. Training

FHS will continue to provide training assistance to the FMOH's program. Priority must be given to federal, zonal, and state personnel.

10. Quality Assurance

FHS has provided limited assistance in this area and agrees that more needs to be done. FHS would look forward to working with the FMOH in establishing a quality assurance system for contraceptives.

11. Cost Recovery

FHS agrees that cost recovery schemes should be explored for family planning and will work with the FMOH in the establishment of cost recovery guidelines.

APPENDIX 4

IMO STATE
FAMILY PLANNING DISTRIBUTION SURVEY

Preliminary Report
August 1992

Imo State, in southeastern Nigeria, is composed of 21 local government areas (LGAs). According to the 1991 census, its population is 2,485,499, ranking it #17 in population among Nigeria's 30 states.

The information contained in this report reflects findings from the April-June 1992 distribution survey done of all facilities which could or do dispense/distribute family planning products and services. The report is preliminary in nature. Survey response booklets from 20 of Imo's 21 LGAs have been returned, but since only 64% of all 2760 booklets have been accounted for, it is not known if results from the missing Imo LGA (Okigwe) or additional results from other Imo LGAs will be submitted to FHS for input to the data base. Accordingly, the following information on Imo State should be considered directionally accurate based on what has been received to date. A more complete report will be made after all data has been received.

Type Facility

Imo State has 1706 facilities which can or could be considered dispensers of family planning services or products. These facilities break down as follow:

<u># Outlets</u>	<u>Type Outlet</u>	<u>% of Total</u>
233	Hospital	14%
117	Health Center	7
102	Clinic	6
181	Maternity Center	11
34	Pharmacy	2
891	Chemist/Patent Medicine	52
134	Store/Supermarket	8
14	Other	1
<u>1706</u>	<u>Total</u>	<u>100%</u>

Facility operator/ownership is as follows:

3	Federally Operated	-
20	State Operated	1%
141	LGA operated	8
1508	Private	88
33	NGO/Volunteer	2
<u>1705</u>	<u>Total</u>	<u>100%</u>

Family Planning Services/Products Provided

Each facility was asked if it provided family planning services or supplies and, of those responding, the answer was:

1368	Yes	80%
336	No	20
<u>1704</u>	Total	<u>100%</u>

Among the 1368 facilities offering some form of family planning services or products, the types of offerings break down as follows:

1095	Condoms	80%
708	Oral Pills	52
168	IUCDs	12
753	Counselling Services	55
502	Vaginal Foaming Tabs	37
204	Injections	15
60	Sterilization	4
57	Pamphlets/Brochures	4
34	Other	2
		<u>100%</u>

It should be noted that the preceding percentages would be 20% lower in each case if based on all 1706 facilities surveyed.

Each facility was asked if it had difficulty obtaining family planning supplies. Of the 1190 outlets responding to the question,

711	Yes (Difficulty)	60%
479	No (No difficulty)	40

No specific question about which product(s) was difficult to obtain was asked.

Each survey enumerator was asked to note any comments/problems which were mentioned at a specific facility. There were 171 comments recorded in No, and the major responses have been broken down into the categories indicated:

23%	Lack of drugs
15	Law agents prevent sale of drugs
8	High cost of drugs
6	Inadequate equipment/facilities
6	Need for government help
6	Lack of skilled personnel
5	Refused comment

69%

Logo Materials Distributed

Accordingly to the report generated, logo materials were accepted/distributed to Imo State as follows:

436	Danglers
3,639	Door stickers
103	Metal plates
676	Car stickers
5,521	Handbills
3,968	Posters
467	Van stickers
<u>14,810</u>	Total logo pieces distributed

In addition, family planning sample products were distributed:

6,286	Condom samples
3,824	Vaginal foaming tablets

ABIA STATE
FAMILY PLANNING DISTRIBUTION SURVEY

Preliminary Report
August 1992

Abia State, in southeastern Nigeria, is composed of 17 local government areas (LGAs). According to the 1991 census, its population is 2,297,978, ranking it #20 in population among Nigeria's 30 states.

The information contained in this report reflects findings from the April-June 1992 distribution survey done of all facilities which could or do dispense/distribute family planning products and services. The report is preliminary in nature. Survey response booklets from 15 of Abia's 17 LGAs have been returned, but since only 64% of all 2760 booklets have been accounted for, it is not known if results from the missing Abia LGAs or additional results from other Abia LGAs will be submitted to FHS for input to the data base. Accordingly, the following information on Abia State should be considered directionally accurate based on what has been received to date. A more complete report will be made after all data has been received.

Type Facility

Abia State has 1495 facilities which can or could be considered dispensers of family planning services or products. These facilities break down as follow:

<u># Outlets</u>	<u>Type Outlet</u>	<u>% of Total</u>
162	Hospital	11%
84	Health Center	6
83	Clinic	6
89	Maternity Center	6
73	Pharmacy	5
908	Chemist/Patent Medicine	61
87	Store/Supermarket	6
9	Other	1
<u>1495</u>	Total	<u>100%</u>

Facility operator/ownership is as follows:

9	Federally Operated	1%
15	State Operated	1
110	LGA operated	7
1351	Private	90
9	NGO/Volunteer	1
<u>1494</u>	Total	<u>100%</u>

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Family Planning Services/Products Provided

Each facility was asked if it provided family planning services or supplies and, of those responding, the answer was:

1244	Yes	83%
250	No	17
<u>1494</u>	Total	<u>100%</u>

Among the 1244 facilities offering some form of family planning services or products, the types of offerings break down as follows:

1063	Condoms	60%
743	Oral Pills	52
165	IUCDs	13
536	Counselling Services	43
400	Vaginal Foaming Tabs	32
207	Injections	17
51	Sterilization	4
42	Pamphlets/Brochures	3
34	Other	3

It should be noted that the preceding percentages would be 20% lower in each case if based on all 1494 facilities surveyed.

Each facility was asked if it had difficulty obtaining family planning supplies. Of the 1113 outlets responding to the question,

575	Yes (Difficulty)	52%
538	No (No difficulty)	48

No specific question about which product(s) was difficult to obtain was asked.

Each survey enumerator was asked to note any comments/problems which were mentioned at a specific facility. There were 71 outlet comments recorded in Abia State and the major responses have been broken down into the categories indicated:

- 20% Need for government help
- 15 Lack of drugs
- 11 Lack of enlightenment
- 8 Inadequate equipment/facilities
- 8 Poor demand for family planning services
- 8 Appreciate government FP program/efforts
- 8 Lack of skilled personnel

78%

Logo Materials Distributed

Accordingly to the report generated, logo materials were accepted/distributed to Abia State as follows:

367	Danglers
2,650	Door stickers
54	Metal plates
350	Car stickers
4,000	Handbills
2,901	Posters
269	Van stickers
<u>10,591</u>	Total logo pieces distributed

In addition, family planning sample products were distributed:

4,868	Condom samples
3,019	Vaginal foaming tablets

APPENDIX 5



THE NIGERIAN NOTES

The Training Network

NEW DIMENSIONS IN THE MANAGEMENT OF FAMILY PLANNING SERVICES

The Family Health Services Project (FHS) in collaboration with the Ministry of Health has introduced an innovative approach to improving the management of family planning services in Nigeria. The project faces the challenge of training personnel at several levels in such management skills as planning, leadership, financial management, information systems, and supervision. In addition, it is generally recognized that, if those who have been trained are to apply and sustain their skills, management systems must be in place. There is little to be done by supervisors if appropriate supervisory systems do not exist at the State and Local Government levels.

In order to meet the double mandate -- to develop management skills through training and to strengthen management systems -- FHS has mobilized the Network. Members of the Network are hand-picked individuals known for their demonstrated training-related skills or persons considered to have strong potential as trainers. The selection process did not necessarily include senior, higher status persons.

Members are being prepared to serve as trainers and management systems consultants to family planning personnel in all parts of the country. They are working with U.S. and Lagos-based consultants to initiate, support and sustain the change efforts required for more effective family planning

programs. The project is looking beyond traditional training to organizational and systems change.

There are currently 32 network members who were selected from the Federal and State Ministries of Health, teaching hospitals, FHS and UNFPA project officers and the private sector.

The competencies of the Network are being developed in five phases, with each phase building on the achievements of the previous phase. The first two phases have been completed; the next three will be underway next year.

Phase 1: Training Network members as trainers and consultants

The first task was to develop common language and skills, build new training and consultation competencies and expand those that the members had already achieved.

Phase 2: Supervised practicum experience

This is an ongoing process through which members apply their new knowledge and skills under the close guidance of a senior consultant.

Phase 3: Training of new Network members

In partnership with a senior consultant, members will co-train the "second cadre" of the Network.

Phase 4: Independent work

In this phase, members will conduct needs assessments, training, and consultation, relying on support and monitoring systems rather than on the presence of senior consultants.

Phase 5: Advanced professional development

It is anticipated that members will attend professional conference and take part in advanced training seminars both in and outside of the country.

It is assumed that by the end of the first phase of the FHS Project in 1993, the Network will be able to oversee almost all the training for management activities.

Why the Network is Working

While many factors contribute to the success of the Network, the following are particularly important.

- 1) The initial selection of Network members was based upon the experience of working with invited members, not on the basis of seniority or position. This procedure met with some complaint, but it has been manageable.
- 2) Network members received intensive initial training as a group. Two experienced trainers and the use of video cameras for giving oral and visual feedback were important.
- 3) The frequent use of network members as trainers. Nothing compensates of in-the-trenches learning and the Network members have been able to build up considerable in-the-trenches experience. This is possible because of the large, long-term FHS project that permits the possibility of giving Network members continuing experience with regular feedback about performance.
- 4) The association of high, positive status with being a Network member. This process was in-

itiated by members being specifically requested to participate, by being the ones directing activities at training sites, by receiving a per diem based on actual costs and by receiving a small daily remuneration for services provided.

5) The in-country presence (all Nigerian) of one or more experienced, capable FHS project staff that communicates frequently with the international consultants (based in the US) and oversees a significant amount of coordination in Nigeria.

The Network is beginning to be used by both the federal and state ministries of health for activities outside of the FHS project. Membership will be more than doubled in the coming year. At this point, all indications are that the Network works.

The Network works because :

- the way members are selected
- intensive initial training
- frequent training and feedback
- high, positive status as network members
- the presence of in-country FHS project staff

For more information about the Network concept and how it works, please contact:

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**INSTITUTIONALIZATION OF FAMILY PLANNING
SERVICE DELIVERY PERSONNEL TRAINING:
A MANPOWER DEVELOPMENT TOOL**

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**Presented at American Public
Health Association Annual Meeting
November, 1991**

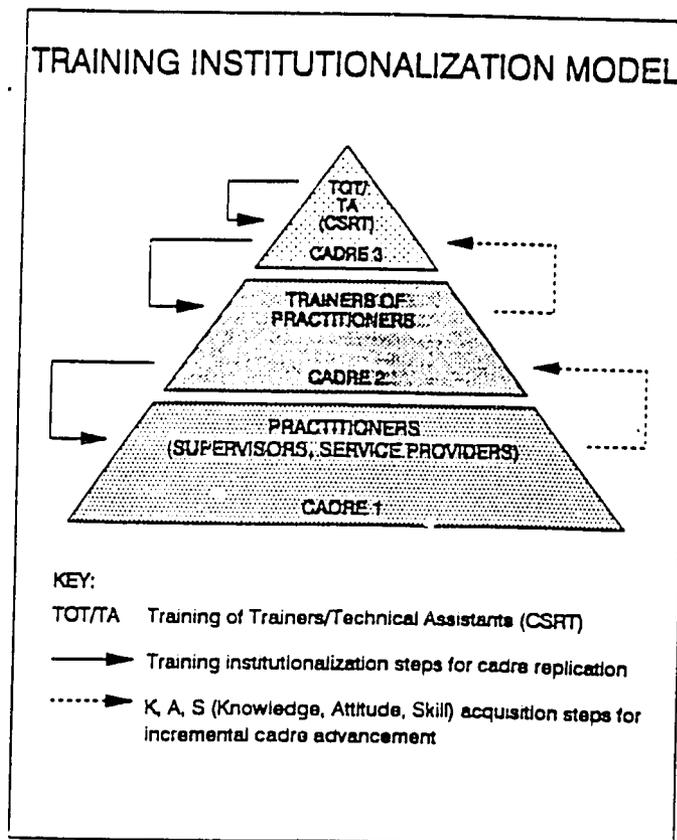
INSTITUTIONALIZATION OF FAMILY PLANNING SERVICE DELIVERY PERSONNEL TRAINING: A MANPOWER DEVELOPMENT TOOL

Introduction

Two of the major program objectives of the Nigeria Family Health Services (FHS) Project, Public Sector, include:

- 1) Integration of family planning (FP) service delivery personnel training into the daily operations of the FHS project; and
- 2) Development of the organizational capacity to systematically operationalize both pre- and inservice training into governmental infrastructures (federal, state and local ministries of health and preservice schools of health training, i.e., nursing, midwifery, medicine and health technologies).

The development of a manpower development strategy for the successful achievement of these project objectives has led International Health Programs (IHP), a subcontractor in the FHS project coalition, to construct a three-tiered process for institutionalizing the training of service delivery personnel. Central to IHP's manpower development strategy for FHS is a functioning national-level cadre or core of trainers of trainers (TOT) and technical assistants/consultants (TA) in FP service provision training entitled Clinical Services' Resource Trainers (CSRT). IHP's three-tiered training institutionalization model follows:



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Description of Model

As previously stated, the desired outcome of this institutionalization process is long-term sustainability of both pre- and inservice training programs. Each successive step is built on competencies acquired in the preceding step as indicated by the dotted line on the right. The acquisition of knowledge (K), attitude (A) and skills (S) within all three cadre levels leads to the creation of a "critical mass" of senior CSRT capable of cadre replication at all three levels, i.e., trainers of trainers/technical assistants, trainers of service delivery practitioners, and practitioners (supervisors, service providers) as indicated by the solid line on the left.

The objective of the first step of the three-tiered process is successful completion of a clinical service delivery course and demonstrated service delivery competency (either clinic or community-based). The second tier centers on TOT and preceptorship theory and skills, while the third focuses on training technical assistance/consultation and training evaluation theory and skills. The size of each tier represents the quantity of personnel required in that cadre to meet service needs/demands. That is to say, large numbers of service providers and service supervisors or practitioners are essential to FP program success; a smaller number of trainers of practitioners are required to continually replenish the constant need for practitioners; and finally, an even smaller number of trainers of trainers and training consultants are needed to replenish the pool of practitioner trainers, who will in time replace themselves and expand their numbers when necessary. Actual numbers of personnel required in each cadre tier should be determined by careful assessment and analysis of the delivery system's manpower requirements. Progression of an individual along the cadre advancement pathway (dotted lines) is not necessarily automatic. Rather, it is based upon the system's requirements and the individual's competency/proficiency level. At the same time, individuals in cadre levels 2 and 3 must function as replicators following the solid line pathway if training institutionalization is to occur.

Background

The need for a pool of CSRT was demonstrated during the proliferation of clinical services training activities within FHS' nationwide states' projects (coordinated by the Public Sector prime contractor, Pathfinder International).

A small number of Nigerian clinical services' trainers/TOT had been frequently and successfully used for these state projects but were insufficient in number to keep pace with the escalating demand for CSRT services.

Throughout the FHS project and its forerunner, PAC I & II, production of personnel within Cadre I was a prime target. TOT had also been produced but in fewer numbers and were soon proven to be insufficient in number to meet the increasing demand for both practitioner trainers and TOT. To address this need, the Federal Ministry of Health (FMOH) and each of the 21 State Ministries of Health and the Federal Territory of Abuja were invited to select CSRT candidates. The following selection criteria were established:

- Successful completion of a contraceptive technology-based FP service delivery workshop (i.e., Clinical Service Provider (CSP), Community Health Extension Worker (CHEW), or Voluntary Health Worker (VHW))
- Recent experience in providing FP services (within past two years)
- Successful completion of a basic TOT workshop
- Recent experience as a trainer (within past two years)
- Availability to act as a trainer of local-level trainers of FP service delivery providers (public or private sectors)

The participants who were selected as CSRT not only represented diverse geographical and cultural characteristics but also demonstrated first-hand knowledge of Nigeria's non-physician service delivery cadres, i.e., clinic-based service providers (nurses and nurse-midwives) and for community-based FP services, CHEWs and VHWs. Over 95% of the CSRT candidates were themselves nurse-midwives. Virtually all of them had either training and/or supervisory responsibilities for at least one, and in most cases two, of the three service provider cadres noted above. Five of the CSRT candidates were seasoned inservice trainers who had been co-trainers with IHP staff over several years.

These seasoned trainers played the role of "senior advisor" for the newer CSRT members and had participated in previous IHP/FHS project endeavors which produced an officially sanctioned FMOH Standard of FP Practice (SOP), schools of nurse-midwifery standardized FP

curriculum modules and standardized inservice curricula for the three levels of service providers, i.e., Nurse-Midwives, CHEWs and VHWs. The senior advisor CSRT are the prototypes for IHP's FHS training institutionalization model having advanced through the KAS acquisition pathway (dotted line) and demonstrated cadre replication and TA competency following the institutionalization pathway (solid line). Current IHP technical assistance activities include standardization of physicians' FP inservice curriculum and FP curriculum modules for Nigeria's 11 schools of medicine and will utilize selected CSRT.

CSRT Development Process

A two-phased approach to creating the CSRT cadre was designed. Five topic areas were targeted as essential to CSRT task performance. They were: contraceptive technology, preceptorship, training theory and methodology, consultation/technical assistance and evaluation of training.

The first phase consisted of an advanced TOT which focused on training and TOT theory and skills, contraceptive technology and client counseling theory. It was conducted in April 1991. Emphasis was placed on progressive application of both contraceptive technology and training/training of trainers theory through simulated practice (micro-training presentations). Video recording of each participant's multiple presentations was used to provide evaluative feedback for both the individual involved and the groups as a whole. Teamwork and collegial collaboration were advocated and practiced throughout. Topic and training designs were selected from the three standardized inservice curricula. A variety of training techniques were required, e.g., demonstration/return demonstration, song, small group discussion, exercise, lecturette. The impact of video replay coupled with immediate verbal and written feedback from peers, greatly accelerated the internalization of skill application for the presenters and their peer observers. Ensurance of CSRTs' competence and comfort in the implementation of the standardized curricula was seen as pre-requirement to training others as trainers.

Within the past six months, CSRTs have been busily conducting a variety of training, curriculum revision and training proposal activities. A computerized data bank has been established to chronicle CSRT's individual training assignments in order to document their utilization and as a tracking mechanism for their ongoing individual professional development.

For example, recently one team of seven CSRTs finalized the national standardized inservice curricula for service delivery personnel (Nurse-Midwives, CHEWs and VHWs) and the TOT curriculum. This past month another CSRT team participated in the drafting of the FP modules for the nationwide Schools of Health Technology preservice CHEW curriculum.

FHS' IEC contractor, Johns Hopkins, had also experienced a similar need for TOT in counseling and so collaborated and cosponsored the first phase of the CSRT developmental activities. In the future, it is anticipated that Johns Hopkins counseling training activities throughout the Nigerian Federation will utilize members of the CSRT.

Phase Two of the CSRT development process is scheduled for early 1992. It is anticipated that the majority of the CSRT will have had at least one TOT experience between May 1991 and the first quarter of 1992. Phase Two will concentrate on the theory and skills of training consultation including training curriculum development, monitoring and evaluation of training activities and the management of training. Advancement of training skills will be encouraged through video-taped training sessions, focusing on role-play, exercises/games and case-study analysis as the chosen training methods. Sharing and analysis of the CSRTs' training experiences between May and early 1992 will be used as a case-study approach to the CSRTs' development process. In-country FHS Pathfinder training staff will assist the CSRT throughout this activity as they did during Phase One and will oversee the assignment of CSRT members to FHS sponsored TOT/TA activities while continuing to maintain the data bank mentioned above.

To date, feedback from CSRT to both FHS/Pathfinder in Lagos and to IHP has included a broadening of training skills' application at levels I and II (dotted-line pathway) with an increase in utilization of CSRT members in the replication of personnel within Cadre I and the involvement of CSRT in the development of training programs to increase numbers in Cadre II. It is anticipated that after the completion of the CSRT's Phase Two activity in 1992, utilization of the membership in training others as trainers and in consulting with ministries or other agencies regarding training programs will also increase, thus contributing to Cadre III expansion, both in numbers and in skills' acquisition.

APPENDIX 6

**List of the 30 States and the Federal Capital Territory,
by Federal Ministry of Health Zone**

ZONE A

STATE	CAPITAL	CURRENT STERLING SUPPLY POINTS	FMOH ZONAL WH'S
Abia-----	Umahia-----	Aba-----	Enugu
Akwa Ibom-----	Uyo-----	Aba-----	"
Anambra-----	Awka-----	Onitsha-----	"
Benue-----	Makurdi-----	Onitsha-----	"
Cross River-----	Calabar-----	Aba-----	"
Enugu-----	Enugu-----	Onitsha-----	"
Imo-----	Owerri-----	Aba-----	"
Rivers-----	Port Harcourt-----	Aba-----	"

ZONE B

Delta-----	Asaba-----	Benin-----	Ibadan
Edo-----	Benin-----	Benin-----	"
Lagos-----	Ikeja-----	Lagos-----	Lagos (CW)
Ogun-----	Abeokuta-----	Lagos-----	Ibadan
Ondo-----	Akure-----	Ibadan-----	"
Osun-----	Osogbo-----	Ibadan-----	"
Oyo-----	Ibadan-----	Ibadan-----	"

ZONE C

Abuja (Federal Capital Territory)-----	Kaduna-----	Kaduna-----	Kaduna
Kaduna-----	Kaduna-----	Kaduna-----	"
Katsina-----	Katsina-----	Kano-----	"
Kebbi-----	Birni-Kebbi-----	Sokoto-----	"
Kogi-----	Lokoja-----	Ibadan-----	"
Kwara-----	Ilorin-----	Ibadan-----	"
Niger-----	Minna-----	Minna-----	"
Sokoto-----	Sokoto-----	Sokoto-----	"

ZONE D

Adamawa-----	Yola-----	Gombe-----	Bauchi
Bauchi-----	Bauchi-----	Gombe-----	"
Borno-----	Maiduguri-----	Maiduguri-----	"
Jigawa-----	Dutse-----	Gombe-----	"
Kano-----	Kano-----	Kano-----	"
Plateau-----	Jos-----	Jos-----	"
Taraba-----	Jalingo-----	Gombe-----	"
Yobe-----	Damaturu-----	Maiduguri-----	"