1995

An investigation of alternative approaches to contraceptive logistics management at the peripheral level

Abu Yusuf Choudhury

Iqbal Ahammed

Amy Gale Dunston
Population Council

AN INVESTIGATION OF ALTERNATIVE APPROACHES TO CONTRACEPTIVE LOGISTICS MANAGEMENT AT THE PERIPHERAL LEVEL

FINAL REPORT

Abu Yusuf Choudhury[1]
Iqbal Ahammed[2]
Amy Gale Dunston[3]

Program for the Introduction and Adaptation of Contraceptive Technology,Bangladesh (PIACT,Bangladesh)

[1] *Director, PIACT,Bangladesh*
[2] *Deputy Director (Research), PIACT,Bangladesh*
[3] *Monitor, The Population Council*

This project was supported by the Population Council's Asia Near East Operations Research and Technical Assistance Project. The ANE OR/TA Project is funded by the US Agency for International Development, Office of Population, under Contract No.DPE-3030-C-00-0022-00, Strategies for Improving Family Planning Service Delivery.

Bangladesh, September 1995

CONTENT

Page

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

ACPR	:	Association of Contraceptive and Population Research
ATFPO	:	Assistant Thana Family Planning Officer
CPI	:	Continuous Physical Inventory
CPR	:	Contraceptive Prevalence Rate
CU-T	:	Copper-T
CWH	:	Central Warehouse
DFP	:	Directorate of Family Planning
DRS	:	District Reserve Store
DS	:	District Store
FP-MCH	:	Family Planning Maternal and Child Health
FPLM	:	Family Planning Logistics Management
FPL	:	Family Planning Logistics
FWA	:	Family Welfare Assistant
FWC	:	Family Welfare Center
FWV	:	Family Welfare Visitor
FP	:	Family Planning
FPI	:	Family Planning Inspector
FWVTI	:	Family Welfare Visitors' Training Institute
GOB	:	Government of Bangladesh
HC	:	Hired Clinic
HQs	:	Headquarters
ICR	:	Inventory Control Register
ISLS	:	Interim Stock Level Survey
IUD	:	Intra-Uterine Device
JSI	:	John Snow Inc.
LMIS	:	Logistics Management Information System
MCH	:	Mother and Child Health
MCWC	:	Maternal Child Welfare Center
MIS	:	Management Information System
MOS	:	Month of Stock
MSR	:	Medical and Surgical Requisites
MOHFW	:	Ministry of Health and Family Welfare
NGO	:	Non-government Organization
PIACT	:	Program for the Introduction and Adaptation of PC
	:	Contraceptive Technology
QCO	:	Quality Control Officer
RKB	:	Record Keeping Book
RWH	:	Regional Warehouse
SKs	:	Storekeepers
TPC	:	The Population Council
TS	:	Thana Store
TFPA	:	Thana Family Planning Assistant
TFPO	:	Thana Family Planning Officer
WH	:	Warehouse
VTTI	:	Vocational Technical Training Institute

EXECUTIVE SUMMARY

1. INTRODUCTION

Contraceptive commodities are received at the peripheral level (i.e. thana and below) from the thana stores on monthly basis by providing indents termed as `pull' system. It is expected that at any point of time a worker or a center at the peripheral level would have 2-3 months' stock of contraceptives. But many surveys/studies indicated that stock-outs of contraceptives were quite frequent. In order to investigate into an improved system of distribution of contraceptives, a three-cell experimental study was undertaken. In the first two cells, contraceptives were delivered following two methods of `push' system, while in the third cell contraceptives were distributed following the existing system i.e. `pull' system. The field experiment was for a period of six months. The results of the study have been presented in this report.

The study was implemented by PIACT,Bangladesh, a local NGO. It was jointly sponsored by the Ministry of Health and Family Welfare (MOHFW) and The Population Council's Asia and Near East Operations Research and Technical Assistance Project. The Family Planning Logistics Management (FPLM) Project of John Snow Inc. (JSI) provided technical support to the study.

2. METHODOLOGY

Methods of distribution: Basically two methods of distribution, `pull' system and `push' system, were tested. Under the `push' system, there were two methods/variants. The three methods are described below.

Push system: Of the two methods/variants under push system method-I was tested in cell-I and method-II in cell-II.

Method-I: The calculation of the monthly requirement of any commodity was based on the quantity of the specific commodity distributed in the month before the last month. This calculation was done by the thana storekeeper.

Method-II: The calculation of the monthly requirements of any commodity was based on the average quantity of specific contraceptive distributed during the past calendar year. This calculation was made by the thana storekeeper.

Pull method: This is the existing method of distribution.

Method-III: The calculation of the monthly requirement was made by the recipients themselves (FWAs/FWVs).

Selection of thanas: The study was conducted in 12 thanas, taking 6 from Chittagong DRS and 6 from Rangpur DRS districts. Three of the thanas under each DRS were accessible and the remaining three were inaccessible. Under each DRS, one accessible and one inaccessible thana were randomly allocated to each of the three experimental cells. Thus, each experimental cell received four thanas, 2 accessible and 2 inaccessible.

Intervention or training given: In each experimental cell, a one-day training was given to the concerned thana officials, namely TFPOs, ATFPOs, Sr. FWVs and Storekeepers on the method of distribution of contraceptives to be followed during the experimental period. In cell-III, in addition to the thana officials, the FWAs and FWVs were also given orientation on the existing method of distribution of contraceptives. It is important to note that this training was the only intervention component of this study.

Methods of data collection: Data for this study were collected at several stages. Before the intervention, a baseline survey termed as pre-intervention survey was undertaken which included interview with the TFPOs, ATFPOs, Sr. FWVs, FWAs and FWVs. Physical inventory of contraceptive commodities at the level of FWAs and FWVs were also carried out at this stage.

After the intervention, data on the distribution of contraceptives were gathered in each month over the 6 month period of the study. Simultaneously, observations were made on the monthly distribution days of contraceptives to gather information on the distribution system -- process of preparation and approval of indent vouchers, mode of distribution and the difficulties faced.

Apart from these, two interim sample surveys were conducted to assess the stock level of contraceptives with the FWAs and FWVs. Finally, at the end of six months a survey termed as post-intervention survey was carried out, similar to the pre-intervention survey.

3. KEY FINDINGS

3.1. Pre-intervention Survey

Interview with FWAs: A total of 512 FWAs were interviewed in the pre-intervention survey. They were aged between 20 and 45 years and most of them had served between 16 and 20 years.
The average number of couples served by an FWA was 653, and the largest percentage served was between 551 and 700 couples.

The majority (85%) said that they submitted their indent to the FPIs. A total of 56 FWAs (11%) stated that they had problems in preparing their indents. All FWAs reported that they had received their supplies from the thana storekeepers. About a quarter of the FWAs reported that there had been at least one incident in the past six months (prior to the interview) where they were not supplied according to their indent. Among them most (62%) cited the insufficient supplies at the thana stores. Other common answer was the absence of the storekeeper. The specific and common problems stated by FWAs included the inadequacy of storage space. Many (37%) cited the lack of a trunk.

Nearly a half of all FWAs had experienced a stock-out for any contraceptive during the past six months from the date of the interview. Stock-out incidents were higher in Chittagong DRS thanas than those of Rangpur DRS and also in the least accessible thanas.

Most stock-outs were reported to have occurred only once. Among those FWAs experiencing stock-out the major reason cited was the lack of stock at the thana store.

More than a half of all FWAs reported that they had a trunk to store their contraceptives. Among those with trunk, nearly all used them for the purpose (97%).

Interview with FWVs: A total of 112 FWVs were in position in the 12 experimental thanas and 92 of them (85%) were interviewed. The FWVs were aged between 20 and 44 years and one-third of them

had served between 11 and 15 years.

Nearly all FWVs submitted their indents either to the TFPO (48%) or to the thana storekeeper (50%). A total of 13 FWVs (14%) stated that they had problems in preparing indents. All FWVs received their supplies from the thana storekeepers. Majority reported that they received their supplies in a timely and proper manner (80%).

More than two-fifths of the FWVs had experienced a stock-out for any contraceptive during the past six months from the date of the interview. Most FWVs who had a stock-out said that the exhausted item was Depoprovera (63%) but pill and condom stock-outs were also mentioned in relatively high frequencies. Most stock-outs were reported to have occurred only once. Among those with stock-outs, the largest percentage (about one third) explained that the thana stores did not have adequate supplies to distribute. About 10 percent of the FWVs stated that they experienced problems due to supplies whose dates had expired or had been damaged or were unusable.

Of all FWVs, about two-thirds offered some type of solution to improve the present supply system. Among them, the most common suggestion (54%) was that supplies should be distributed at the FWC level.

About two-thirds of the FWVs had an almirah to store in their contraceptive supplies. Among them more than four fifth kept all the contraceptives in the almirah, about two-third of whom arranged them in an organized way.

Interview with TFPOs and Thana Storekeepers (SKs): From the 12 experimental thanas, 11 TFPOs and 12 storekeepers were interviewed. The age of the TFPOs ranged from 30 to 53 years. Their length of service ranged from six months to 28 years. Seven out of 11 TFPOs had been in the present thanas for two years or more. All but one had studied at the graduate level or above.

The age of the thana storekeepers (SKs) ranged from 30 to 35 years. The length of service ranged from one month to 27 years with median of 2 years. Duration of service in the present thana ranged from approximately one month (Boalkhali) to 17 years (Kutubdia). Ten of the 12 SKs had educational qualification of HSC, one had SSC and one had studied at the graduate level. Most SKs (9) were responsible for duties other than store maintenance. The most common additional task was accounts

work.

All TFPOs and eight SKs had received training in logistics management.

The TFPOs were asked how contraceptive supplies were received from the DRS. Seven out of 11 TFPOs said that they followed both push and pull systems and four mentioned indent or pull system.

Most TFPOs and SKs reported at least one problem in procuring supplies from the thana store. Of the eight TFPOs and nine SKs who mentioned problems, most (5 of each) referred to transportation problems. Other common problem was inadequate stock at DRS. Five TFPOs and two SKs also stated that supplies were sometimes given in excess of demand. Four TFPOs and four SKs mentioned that they were sometimes supplied with expired commodities. All but one TFPO and two SKs complained of inadequate storage space. Most SKs specifically stated that they did not have enough room to accommodate their stock.

Five TFPOs and five SKs reported a stock out or near stock out of contraceptive supplies in the six month prior to the pre-survey. Three SKs reported condom stock-outs, one C-5, and one Cu-T and one Depoprovera and Noristerat. The reason for stock-outs of condom as stated by SKs was non-receipt of supply from DRS.

The majority of the TFPOs and SKs reported that FWAs/FWVs followed the supply procedures correctly by regularly submitting their monthly indents and not requesting for more supplies than actually required.

The TFPOs and the SKs stated that they filled out a number of different forms at the end of the month. Only the TFPOs reported problems in preparing the reports. They complained of delays in receiving reports from the subordinates which were at times incomplete.

3.2. Interim Stock Level Surveys

Two interim stock level surveys (ISLS) were carried out with the sample FWAs/FWVs during the study period. These surveys were undertaken specifically to gain insight into the actual stock levels of field workers with respect to the different experimental cells. The total number of unions covered under first survey was 72 and 141 FWAs and 67 FWVs were interviewed and in the second survey 72

unions were also covered but 139 FWAs and 63 FWVs could be interviewed. During the survey the investigators physically counted the stock of the sample FWAs/FWVs at the time of their visit.

Survey with FWAs

Stock status of condom (through physical count) on the date of the visit: In the first ISLS, stock-outs occurred with 6 FWAs (4%) and all of them were from the inaccessible thanas. It was also observed in both the surveys that stock-outs occurred most frequently in thanas following method-II (cell-II). On the other hand, over stock (more than 3 months stock)
occurred with about one-third of FWAs and it occurred more with FWAs in the accessible thanas.

The over-stock situations were also observed frequently in thanas following method-II. In the second ISLS, potential stock-outs were found to be quite high in thanas following method-III.

Stock status of pill (through physical count) on the date of visit: The stock-outs and potential stock-outs of pill were similar between thanas of low and high accessibility. However, a greater proportion of the FWAs in thanas of high accessibility were observed to have adequate stock and over-stock than those in the low accessibility thanas. Four stock-outs were observed in the first ISLS and three of them were in thanas following method-II. The potential stock-outs were also more frequent in thanas following method-II. In the second ISLS, thanas following method-III had the most potential stock-outs (10), but method-II was a close second with nine potential stock-outs. Only two potential stock-out cases were observed in method-I.

The reasons for stock-outs or potential stock-outs as stated by the FWAs were: thana store did not supply them according to their requirement (28%), non-placement of indent by them (16%), under estimate of demand (14%) etc. The FWAs who had low stock of condom mentioned that inadequate supply was given from thana store due to condom shortage.

Of the FWAs with over-stock, the most common reasons for over-stock as mentioned by the FWAs were that they were given more supplies than necessary (32%), had distributed less in that month (26%) etc.

Opinions of FWAs on push and pull system of distribution: The FWAs who participated in method-I and II of the experiment said that the new system was better and that they were glad not to be bothered with demand calculation.

In cell-III, 81 percent of the FWAs in both the interim surveys said that they had learnt how to prepare the indent or that indent preparation had become easier. They also stated that they had benefitted from the training on indent preparation. About three quarters of the FWAs following method-III remarked that the existing distribution system was good.

Survey with FWVs

Stock status (physical stock) of condom on the date of visit: In the first ISLS, two of the three condom stock-outs occurred in thanas of low accessibility. In the second ISLS, three condom stock-outs occurred and all were in the thanas of low accessibility. In both ISLS, the FWVs in the accessible thanas tended to have better stock situations than those of inaccessible thanas.

Among the cells/methods, the stock-outs were observed largely in thanas following method-II for both ISLS. The potential stock-outs also occurred mostly in thanas following method-II. It was observed in the first ISLS that 75 percent of FWAs in method-II had over stock of condom. In the second ISLS, it was highest for method-I (75%), followed by method-II (45%).

Stock status of pill: In both ISLS, the FWVs in areas of good accessibility tended to have better stock situations than those in badly accessible areas. No stock-outs of pills were found in the first ISLS. The greatest number of potential stock-outs were observed in thanas following method-III where five of the eight stock-outs occurred. In the second ISLS, the single observed stock-out occurred under method-II and thanas following method-III had the most potential stock-outs. Over-stock situations varied for the three methods in the first ISLS, the most under method-II (62%), followed by method-I. In the second, the most over-stock situations were seen in method-I (65%), followed by method-II.

Stock status of IUDs: IUD stock situations for accessible and inaccessible thanas were similar in both ISLS. Over 58 percent FWVs had over stock of IUD during the time of both the surveys. Stock situations of FWVs were slightly worse under method-III in first ISLS. Method-III had larger

proportions of stock-outs and potential stock-outs (21% together), followed by method-II (15%). In the second ISLS, stock situation was slightly worse in method-I (stock-out and potential stock-out taken together was 11.8%).

Stock status of injectables: In both ISLS, FWVs in areas of high accessibility tended to have better stock situations than those in low accessible areas. More FWVs in the poorly accessible thanas had potential stock-outs, but more FWVs in the highly accessible thanas had adequate stock and over-stock. The FWVs under method-III in the first ISLS had the largest proportion (32%) of potential stock-outs, followed by method-II (14%). Method-I had the most of the over-stock. In the second ISLS, the situation changed mainly under method-III where over-stock increased.

Those who had stock-out or potential stock-out in both ISLS, mentioned that this happened as they could not receive supplies that month. The most common explanations for over-stock of pill, condom, IUDs and injectable were that they had previous stock, distribution had decreased due to lesser demand, supplied were more than indented for etc.

Opinions of FWVs on push and pull methods of distribution: Of all the FWVs under methods-I and II, most in both ISLS said that the new system (push system) was better and that they were glad not to be bothered with demand calculation. However, positive responses towards method-I were slightly greater. Of the 38 FWVs in the first and second ISLS following method-III (pull system), a large majority said that they had learnt how to prepare the indent and had benefitted from the training.

3.3. Post Intervention Survey

The post intervention survey was undertaken to evaluate the effect of three different methods of distribution of contraceptive commodities used in the three experimental cells.

Interview with FWAs

A total of 476 FWAs were interviewed and their physical stock of contraceptives were counted during the post-intervention survey.

Majority of the FWAs (58%) under method-I received contraceptive supplies as per their requirement and nearly a half (48%) under method-III said that they received supplies as per their demand. But only nearly one-third FWAs (31%) in method-II said that they received supplies as per their requirement. As an advantage of `push system' 37 percent FWAs following method-I and 18 percent following method-II said that it was a good thing that they did not need to submit indent. Nearly a half of FWAs from each experimental cell reported that they had experienced condom stock-out during the past six months i.e. during the study period. In case of pill, the proportion of FWAs experiencing stock-out was least for method-I (14%). For other two methods, it was quite high -- 30 percent for method-II and 29 percent for method-III. Physical count of contraceptives showed that none of the FWAs was stock-out of condom or pill. Potential stock-out for condom was quite high for method-III (31%), followed by method-II (20%). Expected stock level was highest for method-I both for pill and condom, followed by method-II.

Most FWAs offered some type of solution to improve the present supply system. Among them the most commonly cited solutions were that supplies should be distributed at the FWC level (78%) and condom should be supplied free of cost (45%).

Interview with FWVs

In all 87 FWVs were interviewed in the post-intervention survey. Majority of the FWVs (63%) in the experimental cell-I (method-I) informed that they were receiving contraceptive supplies as per their requirement after the push system of distribution was introduced. A half of the FWVs under cell-III said that they were receiving supplies as per their demand. In cell-II, however, only 39 percent reported getting their supplies as per their requirement after the new system was introduced. A large majority of FWVs (67%) from cell-I and about a half (49%) from method-II told that it was good that they did not need to submit indent for the supplies.

Majority of the FWVs under method-I (64%) and method-II (69%) reported to have experienced condom stock-out during the study period. For method-III, about 44 percent FWVs reported the same. For pill, the situation was quite reverse, a large majority of FWVs (69%) from method-III had experienced pill stock-out in the study period. For method-I, the proportion of FWVs reporting a stock-out situation was below 10 percent, but for method-II it was 25 percent. For other methods (IUDs and injectable) the proportion of FWVs under method-I experiencing stock-out situation was

least among the three methods.

The physical count of contraceptives with the FWVs revealed that none of the FWVs was out of stock of the four different methods of contraceptives (pill, condom, IUDs and injectable) they were supposed to have. Potential stock-outs were not also frequent for any method in any cell. Rather the proportion of FWVs having over stock was quite high for all methods of contraceptives, particularly in cell-I, followed by cell-II.

About 70 percent FWVs opined that stock imbalances of contraceptives would be reduced if the distribution of contraceptives was made at the FWC level.

Interview with TFPOs and SKs

From the 12 experimental thanas 10 TFPOs and 12 storekeepers were interviewed.

The receipt and distribution figures for three month were collected from the SKs during the interview. It was observed that some of the thanas had not received any condom for the last three months and there was also no distribution of condom in those thanas (Fulchari, Moheshkhali) during that period. Fifty percent thanas did not receive any IUD during the three months period (Fulchari, Boalkhali, Moheshkhali, Rajibpur, and Sitakunda) and in one thana (Fulchari) not a single piece of IUD was distributed. In case of injectables and pills all the thanas had received and distributed the same during the last three months.

Almost all the TFPOs and the SKs reported about stock-out or near stock-out during the six month period prior to the post survey. Most of them mentioned about stock-out of condom which occurred due to shortage of condom in DRS.

It was found that commodities were received both through `push' and `pull' systems from the DRS. Most TFPOs and SKs reported that there were problems in receiving contraceptives from the DRS. The frequently mentioned problems related to transportation, non-availability of supplies on time and inadequate supplies. Beyond the problems relating to receipt of supply of commodities the most common general problem was insufficient space in the thana stores.

The TFPOs and SKs opined that stock-out situation had improved because of the intervention. They however, added that the disadvantage with the existing system was that the FWAs/FWVs could not prepare the indents correctly.

3.4. Analysis of Stock Data

Stock data of contraceptives were collected from many sources throughout the study period. The key findings from the analysis of stock data have been presented here.

Stock status at the thana store: Among all the sample thanas it was observed that the stock status of contraceptives was highly unsatisfactory in Moheshkhali, where the stock level of condom throughout the study period was almost zero.

None of the thanas had satisfactory stock (2-3 months of stock) of condom during the entire 6 month period. The reason for stock-out of condom was the severe nation-wide condom shortage due to procurement problem. The stock status of pill and injectables over the six months was satisfactory while 50 percent of thanas faced the situation of stock-out or potential stock-out of IUDs.

Stock status with FWAs after receipt of supplies: It was estimated that on an average 2.3 percent FWAs in cell-I, 5.5 percent in cell-II and 3.5 percent in cell-III had stock-out or potential stock-out of pill after receipt of pill from the thana store. In case of condom the level of stock-out and potential stock-out after receipt was as high as 11 percent for FWAs in cell-I, 18 percent for cell-II and 14 percent for cell-III.

Stock status with FWVs after receipt of supplies: About 5 percent FWVs in cell-I, 4 percent in cell-II and 3 percent in cell-III had stock-out or potential stock-out of pill after receipt.

With regard to condom, the level of stock-out and potential stock-out after receipt was the least with FWVs in cell-III (10%). For the other two cells, it was 13 percent (cell-II) and 11 percent (cell-I) respectively.

A sizeable percentage of FWVs in all the three cells (cell-I 4%, cell-II 5% and cell-III 6%) did not have any stock or had stock for one month or less of IUD after receipt. In case of injectable contraceptives the levels of stock-out and potential stock-out after receipt were lower than those of IUD.

Correctness of calculation of monthly demand/requirements of contraceptive commodities (pill and condom): It was observed that the majority (53%) of the FWAs and FWVs made mistakes in calculating their monthly demand for pill following the method-III i.e. existing system. For cell-I and II correctness of demand calculation for both FWAs and FWVs was as high as 85 percent.

Physical stock status:

With FWAs: In case of pill it was observed that 2 to 3 percent of FWAs had stock-out in cell-I and cell-III but there was no such case in the post survey. In cell-II stock-out cases were quite high (8%) which declined sharply in the post surveys (2%). For condom it was found in the pre-intervention surveys that about one third of the FWAs in cell-I and cell-III and 44 percent in cell-II had stock-out or potential stock-out of condom. In the post survey, the situation did not change for method-I but it increased substantially for method-II.

With FWVs: None of the FWVs in cell-I was found with 0-stock of pill in any of the four surveys. Furthermore, none of the FWVs in this cell was found to have stock-out in the second interim survey and post-survey. Stock-out cases of pill were also very few in cell-II.

In case of condom a few of the FWVs had 0-stock both in cell I and cell-III. In cell-II quite a substantial proportion of FWVs had 0-stock of condom as found in all the surveys.

Average stock status based on monthly report of FWAs/FWVs: In addition to four independent physical inventories of contraceptives with FWAs/FWVs conducted at different times during the study period, data on the monthly distribution and balance on hand were gathered from MIS

The trends of monthly stock status of condom with the FWAs in the three cells showed that among the three methods, method-I was more efficient to reduce the level of stock-out and potential stock-out of condom.

Average stock status with FWVs: On an average 9 to 17 percent of FWVs in the three cells had stock-out of pill in the six month period prior to the intervention. After intervention this percentage declined to the range of 2 to 7 percent. The decline was very sharp in case of method-III. The level of potential

stock-out was around 10 percent in cell-I and cell-II before the intervention and it came down to 3 percent after the intervention in each of these two cells. For method-III the level of potential stock-out was as high as 16 percent and it rather increased to 19 percent after the intervention.

Although the shortage in stock of condom was prevailing all over the country, yet the stock-out level of condom declined to a large extent after the intervention in all the experimental cells.

In case of IUDs the stock-out as well as potential stock-out levels for each of the three methods declined substantially after the intervention but a sizeable proportion of FWVs in all the cells had stock-out or potential stock-out of IUDs. Over stock level of IUDs was very high both before and after the intervention.

With regard to injectable a large proportion of FWVs were found to have potential stock-out before the intervention: 77 percent in cell-I, 64 percent in cell-II and 71 percent in cell-III. After the intervention, it declined sharply to about 6 percent in cell-I, 4 percent in cell-II and 12 percent in cell-III.

3.5. Observation Study

In order to record the process and management of monthly distribution of contraceptives at the thana FP offices to the FWAs and FWVs, observations were made on the monthly distribution days for a period of six months in the 12 experimental thanas and a total of 69 successful observations were made.

Receipt of monthly reports: In the well communicated thanas all the FPIs and FWVs submitted their monthly reports to thanas except for two FWVs (one of Rauzan and one of Gangachara) within the scheduled date during the six month period of observation. But in some badly communicated thanas some of the FPIs and FWVs were found to be late in submitting the monthly reports.

Approval for distribution of contraceptives: It was observed that in the majority cases the quantity of the contraceptive commodities distributed to the FWAs and FWVs over the study period had the approval of TFPOs. But in about 13 percent observations the storekeepers had distributed the contraceptives without approval of the TFPOs. This happened mainly because of absence/pre-occupation of the TFPOs.

Adherence to the assigned methods of distribution: Rowmari was assigned to follow method-II but the thana office did not follow the method in any month throughout the study period. Moheshkhali also did not follow the method in the first month but it was followed from the second month. Except for these two situations, the experimental methods were followed by all the study thanas.

Preparation and approval of Indent Vouchers (IVs): A big difference was observed in case of preparation and approval of IVs among the most accessible and least accessible thanas. In 78 percent observations in the most accessible thanas it was found that the issue vouchers were made ready by the storekeepers before the time of distribution and those were also approved by the TFPOs. In case of least accessible thanas it was found to be done in only 49 percent of the observations.

Time of beginning and closing the distribution: It was found in 30 percent observations in most accessible thanas and 40 percent observations in least accessible thanas that contraceptive distribution began between 10:00 a.m and 12:00 noon. In the majority of the observations in the least accessible thanas (72%) and most accessible thanas (66%), the distribution of contraceptives was completed by 5:00 p.m.

Distributor of contraceptives: It was observed that among the 12 study thanas, the storekeepers were in place in 5 thanas only. In the remaining thanas the position was lying vacant and the responsibilities of the storekeepers were being performed either by TFPA, Accountant, FPI or Typist.

Supervision during distribution: Among the six observations made in each experimental thana, in 1 to 3 observations in 7 thanas only, the TFPOs/ ATFPOs were found to make supervisory visits to the stores during the distribution of contraceptives to the FWAs/FWVs.

Receipt of Issue Vouchers by FWAs/FWVs: It was observed in two-thirds of the thanas that a copy of the issue voucher signed by the TFPOs was supplied to the FWAs/FWVs along with the supplies of contraceptives. In Rowmari and Rajibpur the issue vouchers were found to have been handed over on the next distribution day.

Carrying of contraceptives: The contraceptives were found to be carried by the FWAs/FWVs mostly in polythene bags, vanity bags, jute bags, cartons, plastic bags, etc. In some observations in some thanas namely Rajibpur, Pirganj and Sandwip it was observed that some FWAs/FWVs asked for bags for carrying contraceptives.

Receipt of contraceptive supplies by FWAs/FWVs: It was found during the observation period that on an average 75 percent of the FWAs and FWVs had received monthly supply of contraceptives. In the thanas where experimental method-I was applied, the percentages of FWAs and FWVs receiving monthly supplies of contraceptives were higher than those of FWAs and FWVs of method-II and method-III.

Recommendation

The advantages and disadvantages for the three methods have been discussed in detail in Section Eight of this report. Method-I of `push' system was considered to be theoretically more appropriate than the second method of `push' system and that of the third method i.e. the `pull' system. The analysis of the stock level data for the three methods clearly indicate that method-I of `push' system was more efficient in reducing the level of stock-out and potential stock-out of different contraceptives compared to the other two methods. Method-II of `push' system and method-III i.e. `pull' method were competing with each other.

Therefore, method-I of the `push' system has been recommended to be introduced in distribution of contraceptives at the peripheral level.

SECTION ONE

INTRODUCTION AND BACKGROUND

1.1. Introduction

The Directorate of Family Planning (DFP) of the Ministry of Health and Family Welfare (MOHFW) supplies contraceptives to the fieldworkers. The fieldworkers receive their contraceptives from the thana stores. It has been learnt from different studies/ surveys that stock-outs at the peripheral level are a perennial problem. The purpose of this study is to address the problems with stock-outs at the peripheral level through testing two variants of `push' model of delivery of contraceptive to service delivery points instead of the present indent or `pull' system.

The study was jointly sponsored by MOHFW and Asia and Near East Operations Research and Technical Assistance Project of the Population Council (TPC). The Family Planning Logistics Management (FPLM) Project of John Snow Inc. (JSI) provided the technical support to the study. This is an experimental type of study. The experiment was undertaken in 12 thanas of Chittagong and Rangpur District Reserve Stores (DRS) districts. Two variants of a `push' system using alternative methods of calculations for required stock levels were tested against a control group. The experiment period was of six months.

PIACT,Bangladesh was commissioned by the Population Council for conducting the study.

1.2. Background

The Bangladesh Family Planning Program started in 1952 as a non-

government initiative with isolated private efforts in urban hospitals and clinics. In 1960, the government of the then East Pakistan began offering family planning services at government hospitals and rural dispensaries. The effort was limited until 1965, when a Family Planning Board was established to organize and operate a field-oriented program. The war of independence in 1971 and its aftermath disrupted the program until 1975. The program's organizational structure was substantially changed in late 1975, and the principal features of the current program were established between 1976 and 1980. Maternal and child health activities were combined with family planning, and 13,500 full-time female family welfare assistants (FWA) were recruited and trained to make house-to-house visits in order to inform couples about family planning and provide necessary supplies and services.

The family planning logistics system started taking formal shape in 1976 when as part of a reorganization at the DFP, a new Logistics and Supply Unit was set up headed by a Director. Subsequently (in 1977), a supply manual was published to guide logistics and supply operations.

The USAID funded FPLM Project started its operation in 1988 to provide technical assistance to DFP and NGOs on matters relating to FP logistics operation and management.

DFP's warehousing and distribution system was also started in 1976 under a project entitled "Establishment of Central Warehouse (CWH) at Dhaka and Distribution Facilities for MCH/FP Supplies throughout Bangladesh".

It is now widely accepted that efficient contraceptive delivery system at the door-step of rural users will increase contraceptive prevalence rate (CPR).

The Director, Logistics and Supply and the Additional Director (Drugs and Stores), have to plan for procurement of contraceptives

on need-assessment basis. The need is assessed on the basis of indents placed by FWAs/FWVs at the union level, store managers at Thana, District, Regional and Central Warehouse levels, as well as projection of clientele coverage at the national level.

Supplies are distributed to the acceptors (i.e. practising couples) at the field level by field level workers of the DFP (i.e. FWAs and FWVs). There is a system of recording, storage and distribution of supplies by the FP field workers with arrangements for verification. Under the Logistics Management Information System (LMIS), there are different reporting forms, like Client Register (Form-1), Field Workers Monthly Report (Form-2), Family Welfare Visitors Monthly Report (Form-3), Thana Monthly Distribution and Stock Balance Report (Form-7B) etc. These reports cover information on status of material supply, stock, distribution performance, and clientele coverage.

1.3. Storage and Distribution System of FP-MCH Commodities of DFP

Stores of DFP: The types of warehouses/stores maintained by DFP along with their numbers are as follows:

Type of Warehouses/Stores	Number	Location
Central Warehouse (CWH)	1	Dhaka
Regional Warehouses (RWH)	3	Chittagong, Khulna, Bogra
District Reserve Stores (DRS)	18	Greater districts
District Stores (DS)	1	Shariatpur
Thana Stores (TS)	467	Thana HQs

Source: Directorate of Family Planning, Logistics & Supply Unit.

Geographic locations of these Warehouses/Stores roughly follow the administrative tiers of the country -- Division, District and

Thana. In addition to the above stores there are numerous service delivery points at different levels like: Family Welfare Centers (FWC), Mother and Child Health (MCH) Unit of the Thana Health Complexes and Sadar Hospitals (SH), Mother and Child Welfare Centers (MCWC), Hired Clinics (HC), Rural Dispensaries (RD), Union Clinics, Satellite Clinics, field workers (FWAs), etc.

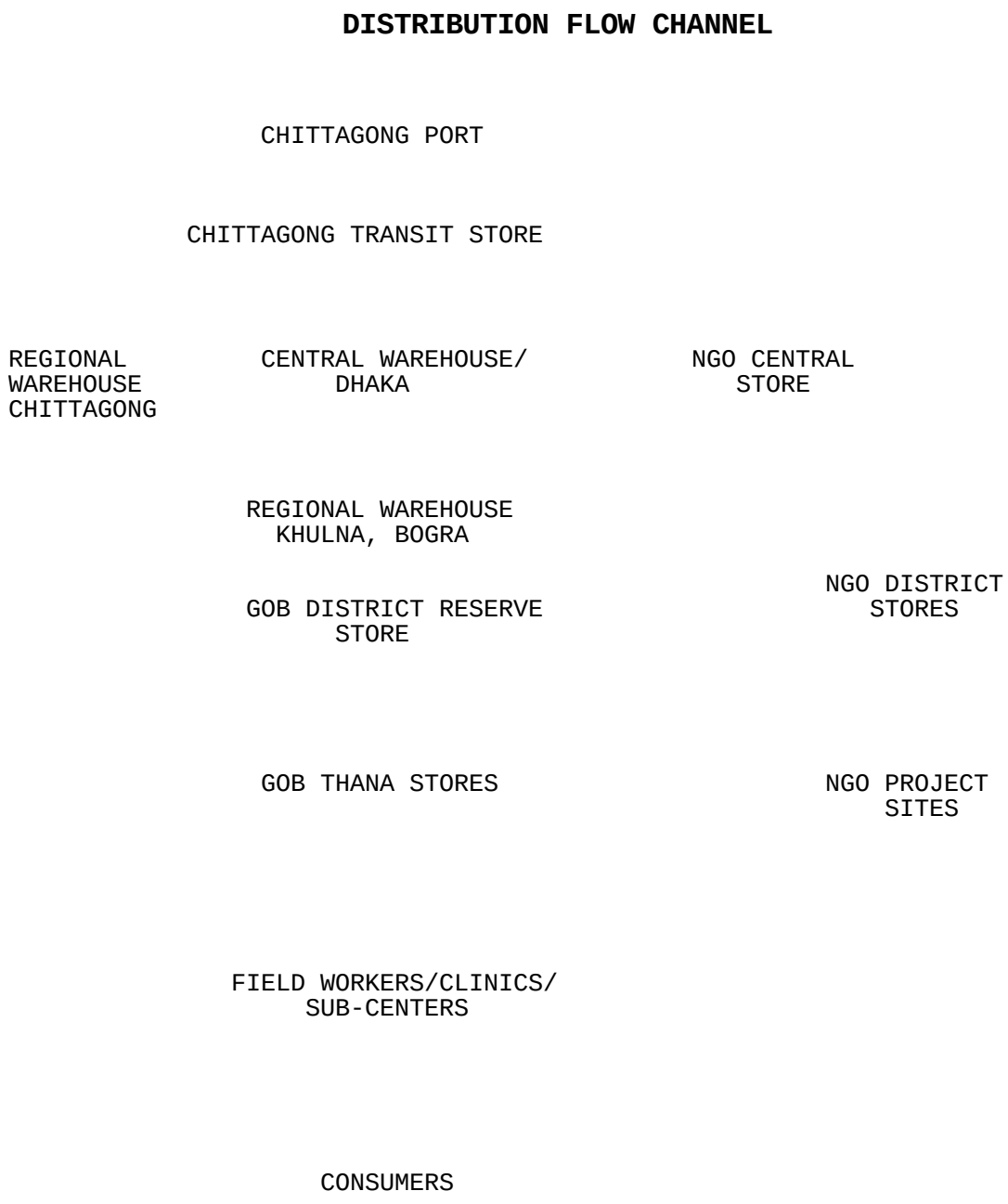
Storage and distribution: Most foreign procured and ocean-shipped commodities arrive at a transit warehouse located at Chittagong RWH. Dhaka CWH and Chittagong RWH draw commodities from this transit stores according to their respective needs. After receiving its commodities, Dhaka CWH sends supplies to two Regional Warehouses -- Khulna RWH, and Bogra RWH. The three Regional Warehouses and Dhaka CWH in turn supply 18 District Reserve Stores (DRS). The only District Store (DS) at Shariatpur receives its supply directly from Faridpur DRS. Each CWH/RWH/DRS/DS supplies to the Thana Stores. Thana stores, in turn, supply approximately to 23,500 Family Welfare Assistants (FWAs) and 4,800 different service outlets. FWAs supply condoms and pills directly to acceptors. FWVs based at clinics provide a broad range of FP-MCH commodities/services to clients. Figure-1 shows the distribution flow of FP-MCH commodities.

Dhaka Central Warehouse also supplies contraceptives to the Headquarter Stores of a few national NGOs who have their own distribution network.

Locally procured items (e.g. regular and emergency medicines) are received directly by Dhaka CWH. Dhaka CWH, in turn, supplies these to the three regional warehouses. The rest of the distribution structure of the locally procured items is the same as that used for foreign procured items.

Figure-1

GOB Storage and Distribution Network



1.4. "PUSH" and "PULL" Systems of Distribution

Push system: In the "push" system the kinds of items, sending time, place and quantity are determined and controlled by store/ warehouse officials based on the amount currently in stock. This system in Bangladesh is followed by DFP from CWH up to the DRS level.

Pull system: In the "pull" system the unit or individual receiving supplies makes specific request for the amount needed; that is, the receiving party calculates the amount needed. This system in Bangladesh is followed by DFP from thana store to lower levels.

1.5. Review of Literature

The problem with stock-out at the peripheral level: There are several possible reasons, not mutually exclusive, for stock-out problems at the peripheral level. There may also be stock-outs at the higher levels. Thana storekeepers, FWVs or FWAs may not be adequately trained; supervision and monitoring may be weak; transport not may be available; supply may be diverted for sale in local market; or the system for calculating quantities to order may be unworkable in the Bangladesh setting.

Stock level survey: In September-October 1993 FPLM/JSI conducted a baseline survey of contraceptive stock at the levels of thana stores, field workers and the acceptors on behalf of the Directorate of Family Planning. Table-1.1 shows the findings from the survey on stock levels at different tiers by methods. The FWAs showed the highest potential stock-out of pills (28.3%). Considerable under stocks had also been identified for pills and condoms at thana, FWV and FWA levels.

Table 1.1: Stock levels at different tiers by methods as per physical count on the date of visit

[In percentage]

Month of stock (MOS)	Methods										
	Pills			Condoms			Injectables			IUDs	
	Thana	FWA	FWV	Thana	FWA	FWV	Thana	FWA	FWV	Thana	FWV
0-Stock (Stock-out)	0.0	0.9	3.4	0.0	4.7	4.8	2.2	0.0	3.4	6.5	9.4
>0 - ≤1 (Potential stock-out)	13.0	28.3	19.3	10.9	20.2	10.7	10.9	20.0	17.0	8.7	4.8
>1 - ≤2 (Under stock)	17.4	29.2	20.5	13.0	24.9	14.3	15.2	30.0	27.3	6.5	6.3
>2 - ≤4 (Adequate stock)	37.0	32.9	28.4	41.3	26.4	22.6	54.3	50.0	35.2	19.6	20.3
>4 (Over stock)	32.6	7.9	28.4	34.8	23.8	47.6	17.4	0.0	17.0	58.7	59.4
N	46	428	88	46	425	84	46	10	88	46	63

Source: 1993 Stock Level Survey.

Reasons for stock-outs: Table-1.2 shows the major reasons for stock-outs and under stocks at periphery level. The most frequently stated reason was "supply was less than the requirement". Approximately one-third of all respondents gave this reason for stock-outs of pills and condoms.

Table 1.2: Major reasons for stock-out and under stocks based on responses of thana store personnel and field level workers

[Multiple response, in percentage]

Major reasons	Pills	Condoms	Injectables	IUDs
Supply less than requirement	36.6	33.2	16.7	9.0
Transportation constraints and irregular delivery	32.5	28.1	16.6	10.2
Seasonal increases in demand	19.2	13.7	5.6	1.9
Switch over to a new method	19.2	21.7	8.9	4.8
Lack of store space and storing facilities (e.g. racks, almirah, etc.)	10.5	11.1	3.8	2.4

Source: 1993 Stock Level Survey.

Findings from the Stock Level Survey 1994 conducted by PIACT,Bangladesh are shown in Table-1.3. It also shows that considerable stock imbalances are in existence with the FWAs and FWVs at the peripheral level.

Table 1.3: Stock levels at different tiers by methods as per physical count on the date of visit

[In percent]

Month of stock (MOS)	Methods										
	Pills			Condoms			Injectables			IUDs	
	Thana	FWA	FWV	Thana	FWA	FWV	Thana	FWA	FWV	Thana	FWV
0-Stock (Stock-out)	1.3	2.9	4.8	19.7	9.5	15.9	0.0	3.4	4.1	2.6	4.3
>0 - ≤1 (Potential stock-out)	5.3	17.3	13.0	42.1	27.5	14.4	3.9	10.3	17.8	1.3	6.5
>1 - ≤2 (Under stock)	18.4	28.9	17.8	19.7	25.1	15.2	19.7	20.7	30.8	10.5	9.4
>2 - ≤4 (Adequate stock)	64.5	40.5	31.4	17.1	24.4	16.6	52.6	44.8	28.1	26.3	35.3
>4 Over stock	10.5	10.3	34.9	1.3	13.6	37.7	23.7	20.7	19.2	59.2	44.6
N	76	698	146	76	698	138	76	29	146	76	139

Source: 1994 Stock Level Survey.

1.6. Justification of the Study

Availability of contraceptives at the door-step of family planning acceptors is a precondition for increasing contraceptive prevalence rate (CPR).

From the results presented in Table-1.1, 1.2 & 1.3 regarding the stock status the following observations are made:

1. There is often a break of chain in contraceptive supplies at the user level due to stock-out or near-stock-out up to about 30 percent of FWAs.

2. Percent of stock-out is more at the field worker level than at the thana level.

3. Stock-out and over stock situation prevail at the same time.

4. Major reason for stock-out is that supply is less than the requirements.

These observations clearly indicate that there is a problem of distribution at the thana level and below where the "pull" system is in place. Although the problem is known to exist, yet very little is known about the exact dimension of the problem.

The problem may be due to the lack of understanding of the system by the field workers and the storekeepers or it may be that there is an inherent problem in accepting the apparently cumbersome "pull" system by the large number of field workers. Still there might be some other aspects which are not known to us.

The feeling among the system managers is that if adequate stock levels were available at each tier of the logistics system, the inevitable day to day problems that beset the system could be solved before stock runs out; and that the key to adequate stock levels may lie in implementing a simple "push" system at all levels, in which adequate stocks are automatically pushed to each lower level each month.

It is, therefore, a situation where DFP is to decide whether the present problem of stock-out at the peripheral level could be overcome through increasing the efficiency of the present system or there is a suitable alternative to it. The present study is, therefore, a timely attempt to examine the possible alternatives with a set of suitably drawn hypotheses.

1.7. Objectives of the Study

The objectives of the study are as follows:

General Objective

To ensure that a continuous flow of contraceptives is available to the family planning program at all levels.

Specific Objectives

1. To determine whether the present system should be replaced by a "push" system at the peripheral level.

2. If so, to determine the appropriate variant of the "push" system to be used.

3. To obtain a detailed description of the functioning of the contraceptive logistics system at the thana level and below.

1.8. Hypotheses of the Study

The hypotheses of the study are:

1. That a substantial part of the problem of stock-outs at the peripheral levels can be solved by technical adjustments in the distribution system. As explained above, there is reason to believe that switching from a "pull" to a "push" system may in itself substantially improve the situation. However, it is also possible that technical adjustments as determined from Dhaka will have little effect on the availability of contraceptives without improved implementation, regardless of systems.

2. That, in the present context, a "push" system will work better than a "pull" system. It is hypothesized that both variants of the "push" system tested in this study will perform better than the present system. It is assumed, but not tested, that an improved "pull" system will not be as satisfactory as a "push" system.

SECTION TWO

STUDY DESIGN AND METHODOLOGY

2.1. Description of Experiment

This study was an experimental one. The prime objective of the experiment was to test whether the present `pull' system of distribution of contraceptive of DFP should be replaced by a `push' system at the peripheral level. The experiment was conducted in 12 thanas of Chittagong and Rangpur DRS districts.

Three different methods of distribution were tested in three different experimental cells. Each field worker began with three months' estimated stock of each contraceptive; that is, each field worker had begun the month with three months' stock of each contraceptive.

The description of the experimental methods is given below:

Description of Experimental Methods

Name of methods	Calculation procedure
Method-I [Month before last distribution]	The calculation of monthly requirements of any commodities is made by the thana storekeeper (push system of distribution) and the calculations are as follows: $R_1 = 3 \times D_1 - B_1$ Where: R_1 = Monthly requirements of any particular commodity D_1 = Month before last distribution of the commodity (if calculation is made for June then month before last distribution will be of April) B_1 = Closing balance of the last month (if calculation is made for June then closing balance of May) (see appendix-A)
Method-II [12 monthly average distribution method]	The calculation of monthly requirements of any commodity made by the thana storekeeper (push system of distribution) and the calculations are as follows: $R_2 = 3 \times D_2 - B_2$ R_2 = Monthly requirements of any particular commodity D_2 = Monthly average distribution of the last 12 months (for this project 12 month was January-December 1994) B_2 = Closing balance of the last month (see appendix-B)
Method-III [Existing method]	There are three calculations in this method and are made by respective FWA/FWV (pull system of distribution) which are as follows: A. If closing balance of any commodity is less than the distribution of the previous month then demand will be twice the distribution of previous month. B. If closing balance of any commodity is more than the distribution of previous month but not more than the twice of the distribution then demand will be equal to the distribution of the previous month. C. If closing balance of any commodity is more than twice of the distribution of previous month then the demand will be nil. Say calculation of demand is being made for June, closing balance of May is B_1 and distribution of last month i.e. April is D_1 a) if $B_1 < D_1$ then demand for June will be $2D_1$ b) if $B_1 > D_1$ but $< 2D_1$, then demand for June will be D_1 c) if $B_1 \geq 2D_1$ then demand for June is zero

2.2. The Interverntion Training for Thana Officials

The Logistics and Supply Unit of the Directorate of Family Planning (DFP) and John Snow Inc. (JSI) jointly designed the field experiment of the three systems of distribution of contraceptives. This is a three cell study, one method of distribution being tried in each cell. The relevant officials of the thana FP offices from the individual experimental cells were imparted one day training on the method/system of distribution assigned to the cell. It is important to note that this training was the only intervention component of this study. After this intervention/training the data on the distribution of contraceptives were gathered from each study thana over a period of six month and no further intervention/ training/orientation/advice was given during this data collection period. The training was given with the technical support from JSI and DFP. The training for personnel of Rangpur DRS was held during the period from November 20 to November 24, 1994 and for Chittagong DRS it was from December 12 to 15, 1994. The calculation sheets for the monthly contraceptive requirement (Appendix-A&B) and the instruction manuals for the individual methods of experiment were also developed and provided to the respective thana personnel.

2.3. Period of Experiment

The experiment continued for six months (January-June'95) during which the performance of the logistics system in the various cells was evaluated.

2.4. Selection of Thanas

As mentioned earlier the study was conducted in 12 thanas of Chittagong and Rangpur DRS district of DFP. Thanas were selected from Rangpur and Chittagong DRS districts. There are 35 thanas under Rangpur DRS and 23 thanas under Chittagong DRS. A total of 12 thanas, 6 from each DRS area, were selected for the study (Table-2.1). The 6 thanas of one DRS area were randomly assigned

to 3 study cells, each receiving one `inaccessible' and one `accessible' thana. The inaccessible thanas were defined as those where supply truck of DFP could not reach directly or where road communication was not in existence. On the other hand, the thanas with good road communications i.e. where DFP trucks could reach easily were defined as accessible thanas. Among the accessible thanas the ones which are located within the municipal area of DRS district were excluded from the list because in these thanas the FWAs/FWVs were not available as in the others. Thus the conditions of the communication system from DRS to the individual thanas were (i) where the DFP truck could reach directly and (ii) where they could not. These two factors were considered for determining the accessibility or otherwise of a thana.

Based on the above two criteria, the thanas under each of the two DRS were arranged in ascending order in respect of their accessibility from the DRS. In this order, the first three thanas in the list were considered as the most inaccessible ones and the last three as the most accessible. The sampling frame for the two DRS was formed in this way. For arranging the thanas as mentioned above, we used the relevant information of JSI.

From the top three thanas in each sampling frame one thana was selected by using simple random sampling procedure and this was assigned randomly to a study cell under the concerned DRS. The process was repeated to assign thanas to the remaining two study cells under a DRS.

For achieving wider contrast in respect of accessibility between the two study thanas in each study cell, the second thana was selected from the bottom three thanas of the sampling frame and assigned to the study cell applying the above procedure.

The selection of thanas from the sampling frame for the other DRS and allocation of thanas to the study cells were also made following the above-mentioned procedure.

Table 2.1: List of sample thanas by experimental cells and accessibility status

Experiment Cell #	Name of thanas	Accessibility status	Thana under the district	Thana under the DRS
I (Month before last method)	Fulchari	Bad	Gaibandha	Rangpur
	Gangachara	Good	Rangpur	
	Boalkhali	Good	Chittagong	Chittagong
	Kutubdia	Bad	Cox's Bazar	
II (12 monthly average method)	Rowmari	Bad	Kurigram	Rangpur
	Pirganj	Good	Rangpur	
	Rauzan	Good	Chittagong	Chittagong
	Moheshkhali	Bad	Cox's Bazar	
III (Control)	Pirgacha	Good	Rangpur	Rangpur
	Rajibpur	Bad	Kurigram	
	Sitakunda	Good	Chittagong	Chittagong
	Sandwip	Bad	Chittagong	

2.5. Method of Data Collection

Considering the prime objective of the study the data were collected through the following methods:

- through review of available information
- through observation and/or physical count
- through interview.

2.5.1. Data collection through review of available information: Data on receipt, stock and distribution of contraceptives for January-December 1994, of each sample thana stores and field workers were collected and reviewed to determine the monthly stock status and also their demand.

2.5.2. Data collection through observation: Observation is a technique that involves systematic selection, watching and recording the behavior of the respondents.

- On the day before the distribution in each thana, the physical and ICR balances of the contraceptives of the thana store were collected along with the receipts and distribution status of contraceptives of the store in each month during the experimental period (January-June'95).

- In order to get information on the actual procedures of distribution of FP commodities to the field-workers at the thana level, observations were conducted on the distribution day.
  For conducting observations a checklist/guideline (Appendix-C) was provided to the field observers along with note sheets. They were asked to note down the observations in the note sheets informally without letting the store personnel know about it.

- At the end of the distribution, copies of the calculation sheets used for distribution of contraceptives to FWAs/FWVs and MIS forms 2, 3 & 7B (monthly report form used by FWAs, FWVs and SKs) were collected from the storekeeper.

A team of two investigators was deployed in each thana to collect these information before and on the distribution day.

2.5.3. Data collection through physical count: Two interim stock level surveys were conducted. The number of FWAs and FWVs interviewed in the interim surveys is shown in Table-2.2. During the survey the field

officers were asked to physically count the stock of contraceptives lying with the FWA/FWV at the time of their visit. They also gathered opinions of the respondents on the system of distribution of contraceptives. A predesigned format was provided to the field data collectors for conducting physical count (Appendix-D).

Table 2.2: Number of FWAs and FWVs interviewed during interim stock level surveys

Cell #	Sample thana	No. of sample union	No. of FWAs surveyed		No. of FWVs surveyed	
			1st	2nd	1st	2nd
I	Gangachara	5	10	10	5	4
	Fulchari	5	10	9	4	4
	Boalkhali	6	12	12	6	5
	Kutubdia	4	6	8	4	4
	Sub-Total:	**20**	**38**	**39**	**19**	**17**
II	Pirganj	10	20	18	10	9
	Rauzan	10	20	19	10	10
	Moheshkhali	5	9	9	5	5
	Rowmari	3	6	6	3	3
	Sub-Total:	**28**	**55**	**52**	**28**	**27**
III	Pirgacha	6	12	12	5	6
	Rajibpur	2	4	4	2	1
	Sandwip	9	18	18	6	5
	Sitakunda	7	14	14	7	7
	Sub-Total:	**24**	**48**	**48**	**20**	**19**
Total:		**72**	**141**	**139**	**67**	**63**
Target		**72**	**144**	**144**	**72**	**72**

Note: Ist: First Interim stock level survey was conducted during 23rd through 30th March '95

2nd: Second Interim Stock Level Survey was conducted during 23rd through 30th May '95.

2.5.4. Data collection through interview: Pre and post-intervention surveys were conducted. All the TFPOs, thana store keepers, FWVs and FWAs of the study thanas were interviewed at the beginning of the study to collect the data on the present system of distribution and at the end of the study to record his/her own evaluation of the performance of the system compared with the past. The number of personnel interviewed during pre and post-surveys is shown in Table-2.3. The pre-intervention survey was conducted during the period from 17 through 25 November 1994 in Rangpur DRS and 28 November through 10 December 1994 in Chittagong DRS. The post-intervention survey was conducted from 20 through 30 June 1995.

Table 2.3: Number of FWAs, FWVs, TFPOs and SKs interviewed during pre and post-intervention surveys

Cell #	Name of thana	No. of FWAs surveyed		No. of FWVs surveyed		No. of TFPOs surveyed		No. of SK surveyed	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post
I	Fulchari	35	34	7	5	1	1	1	1
	Gangachara	36	35	4	4	1	1	1	1
	Boalkhali	45	44	11	9	1	1	1	1
	Kutubdia	23	16	6	6	1	1	1	1
	Sub-Total:	**139**	**129**	**28**	**24**	**4**	**4**	**4**	**4**
II	Rowmari	28	27	5	5	1	A	1	1
	Pirganj	77	74	11	10	1	1	1	1
	Rauzan	59	53	14	14	1	1	1	1
	Moheshkhali	33	29	6	6	1	1	1	1
	Sub-Total:	**197**	**183**	**36**	**35**	**4**	**4**	**4**	**4**
III	Pirgacha	62	59	9	8	1	1	1	1
	Rajibpur	8	7	3	3	1	A	1	1
	Sandwip	66	57	9	8	1	1	1	1
	Sitakunda	41	41	10	9	1	1	1	1
	Sub-total:	**177**	**164**	**31**	**28**	**4**	**4**	**4**	**4**
Total:		**512**	**476**	**95**	**87**	**11**	**10**	**12**	**12**
Target:		**539**	**512**	**112**	**95**	**12**	**12**	**12**	**12**

Note: A = TFPOs were absent during the survey period.

2.6. Data Collection Instruments

The following data collection instruments were developed:

1. Instrument for interviewing TFPOs (pre - post)
2. Instrument for interviewing storekeepers (pre - post)
3. Instrument for interviewing FWVs (pre - post)
4. Instrument for interviewing FWAs (pre - post)
5. Instrument for conducting interim stock level surveys
6. Instrument for collecting observation data from field workers

The data collection instruments were developed in keeping consistency with the objectives of the study. The draft instruments were developed in English in consultation with the TPC Monitor and were revised and presented to TPC for review.

2.7. Pretesting of Data Collection Instruments

On receipt of the comments of the TPC, the draft questionnaire (English version) were translated into Bangla and pretested in the field situation to see the consistency of wording, sequence of questions, time of interview, etc. The pretest of the questionnaire was conducted by professional staff of PIACT,Bangladesh. After completion of the pretest, the instruments were modified according to pretest results and were finalized.

2.8. Recruitment of Field Staff and their Training

Field Officers/Interviewers were recruited in 5 phases. In the first phase (pre-intervention survey) 29 field staff with university degree and having past experience in data collection were recruited. They collected data from the FWAs, FWVs, SKs and TFPOs.

In the second phase (observations) 24 field officials were recruited for data collection through observations on the day of distribution of contraceptives from the thana stores.

In the third phase (first interim stock level survey) 29 fieldworkers were recruited for collecting stock status data through physical counting of contraceptives with the sample FWAs/FWVs at different levels (union and village). In the fourth phase (second interim stock level survey) also 29 field officers were recruited.

In the fifth phase (post-intervention survey) 36 field staff were recruited to collect data from FWAs, FWVs, SKs and TFPOs.

Survey personnel were trained separately in five phases. Training methods involved lectures in classroom environment, role play and practical training in the field.

2.9. Field Operations

The data collection work was completed in five phases. In the first phase 12 teams each consisting of 2-3 members were deployed, one in each thana, which collected data from the FWAs, FWVs, SKs and TFPOs during the period from 15 November'94 through 25 November'94 in Rangpur DRS area and 28 November through 10 December'94 in Chittagong DRS.

In the second phase of data collection 12 teams each consisting of 2 members were deployed to collect data from the thana level through observations on the day of distribution of contraceptive to FWAs/FWVs and a total of 72 observations, 6 in each thana were conducted from January to June 1995.

In the third phase of data collection 12 teams each consisting of 2-3 members were deployed to collect data from the sample FWAs/FWVs of the union level through physical counting of contraceptives. The data were collected during the period from 23 March'95 through 30 March'95.

In the fourth phase of data collection 12 teams each consisting of 2-3 members were deployed to collect stock level data from the sample FWAs/FWVs. The data were collected during the period from 23 May through 30 May'95.

In the fifth phase of data collection 12 teams were deployed each team consisting of 2-4 members. They collected data from the FWAs, FWVs, TFPOs and SKs. The data were collected during 20 June through 30 June'95.

2.10. Quality Control

To ensure the quality of data, a post enumeration survey of selected questions/variables was carried out by two of our quality control officers among 5 percent of the randomly chosen respondents. They also checked on the spot performance of data collection of field officers. In addition, professional staff of PIACT and The Population Council also visited the field spots during the data collection period.

2.11. Data Management

Data management activities included registration of the questionnaires, data processing, and computer processing. As soon as the filled out questionnaires/forms/instruments/guidelines/ checklists were received from the field, the instruments were recorded in a registration book which noted identification numbers, and the individual respondents' interviewing status. The

registration of questionnaires facilitated their storing and handling during the data processing stage. A research assistant was assigned to register, store, and maintain the questionnaires.

The questionnaires were edited and coded for entry into the computer. Editing was undertaken in order to ensure that schedules had been correctly and completely filled out by the interviewers and that there was consistency in the responses. A team of editors and editing verifiers performed these tasks.

The Project Coordinator (PC) checked five percent of the edited and verified questionnaires. Coding of the information was initially done by coders and then verified by coding verifiers. The PC also verified five percent of the coding work.

Data collected from FWAs, FWVs, SKs and TFPOs were directly entered into the computer while the data collected through observations were manually processed as majority of the questions were descriptive in nature. Thus data were processed both manually and by using computer software SPSS PC+, FOXPRO.

2.12. Cooperation of TPC

The Population Council (TPC) employed a Study Monitor who helped in the development of data collection instruments; and assisted in field staff training, data analysis and report preparation.

2.13. Study Management

There was a study steering committee chaired by the Director, Logistics and Supply Unit of DFP and included representatives from Logistics and Supply Unit, JSI, TPC, and PIACT,Bangladesh. The steering committee reviewed the progress of the study in its monthly meetings.

SECTION THREE

PRE-INTERVENTION SURVEY

3.1. Introduction

The pre-survey was carried out in experimental thanas, six in Chittagong DRS and six in Rangpur DRS and information was collected from all TFPOs, Storekeepers, FWVs and FWAs in these sample thanas. From 17-25 November 1994, data were collected in Fulchari, Gangachara, Rowmari, Pirganj, Rajibpur, and Pirgacha thanas of Rangpur DRS. From 28 November through 10 December'94, data collection was done in Sandwip, Sitakunda, Boalkhali, Rauzan, Kutubdia, and Moheshkhali of Chittagong DRS.

3.2. Interviews with FWAs

A total of 539 FWAs were in position and 95 percent of them could be successfully interviewed.

3.2.1. Profile of respondents: FWA respondents were aged between 20 and 45 years and above, with most in the ages of 25 to 29 and 36 to 39. There were no significant differences between age groups and DRS areas, thanas or accessibility.

Most FWAs had served between 16 and 20 years. The duration of FWA service did not differ by the accessibility of the thana. However, differences were observed between service duration and DRS (p=.039) and thana (p=.000). In Rangpur DRS, more FWAs had served shorter durations, and in Chittagong DRS, more FWAs had served longer durations (Table-3.1). Specific thanas generally followed their DRS trend. The exceptions were Fulchari and Rajibpur and Rangpur where more FWAs were older and Sitakunda of Chittagong, where more FWAs were younger.

Table 3.1: Duration of service of FWAs by DRS

Service duration (yrs)	Rangpur		Chittagong	
	No. of FWAs	%	No. of FWAs	%
1 - 5	74	30.1	62	23.3
6 - 10	51	20.7	52	19.5
11 - 15	14	5.7	34	12.8
16 - 20	107	43.5	117	44.0
21 and above	0	0.0	1	0.4
Total	246	100.0	266	100.0

Over a half of all FWAs had achieved the Secondary School Certificate (SSC). Nearly a quarter was below SSC and the same number had achieved Higher Secondary School (HSC) or above. No differences of educational level between DRS areas were found. However, significantly more FWAs in the most accessible thanas had greater educational levels than those of the least accessible thanas ($p<.000$) (Table-3.2).

Table 3.2: Educational levels of FWAs by accessibility of thanas

Thana access	Below SSC		SSC		HSC		Graduate & above		Total	
	N	%	N	%	N	%	N	%	N	%
Most access	48	15.0	176	55.0	83	25.9	13	4.1	320	100
Least access	76	39.6	88	45.8	27	14.1	1	0.5	192	100

Note: N = Number of FWAs

3.2.2. Estimated need for contraceptives: The FWAs were asked to

estimate their monthly needs of oral pills without looking at their records. These estimates were then compared to the average demand of the previous four months, a number calculated from their official records. Estimates ranged from the underestimate of 261 cycles to the overestimate of 341 cycles, with a mean of 31. Most FWAs estimated their need within 25 cycles of pills (52.4%). A total of 42.3 percent overestimated by 26 cycles or more. Only 5.3 percent underestimated their need by more than 26 cycles.

FWA estimates of condom were also compared to the four month average demand calculated from their official records. Estimates ranged from the underestimate of 299 pieces to the overestimate of 999 pieces, with a mean of 50. A total of 37.7 percent of FWAs estimated their condom need to within 25 pieces and 54.7 percent overestimated their need by over 26 pieces. Only 7.6 percent underestimated their need by more than 26 pieces.

3.2.3. Total number of couples served: FWAs were asked about the total number of eligible couples in their working areas. The average number was 653, and the largest percentage served was between 551 and 700 couples (Table-3.3).

Table 3.3: Number of couples served by FWAs

No. of couples	No. of FWAs	Percentage
0 - 250	10	2.0
251 - 400	37	7.2
401 - 550	111	21.7
551 - 700	162	31.6
701 - 850	113	22.1
851 and above	79	15.4
Total	512	100.0

3.2.4. Contraceptive receipt: When FWAs were asked how requests were placed for contraceptive supplies, most stated that they

submitted a demand list (69.9%). Though multiple answers were allowed, none of the other modes were as popular (Table-3.4).

Table 3.4: Mode of request for contraceptive supplies made by FWAs

[Multiple response]

Mode of request	No. of FWAs	Percent
Through demand list	358	69.9
MIS Form No. 2	97	18.9
MIS Form No. 4	24	4.7
Mention demand in monthly report	35	6.8
Verbal request to FPI/TFPO	12	2.3
Items received by attending monthly meeting	68	13.3
Materials collected from Storekeeper	65	12.7
Other	57	11.1
Total	512	

Only 20.1 percent of FWAs stated that they had any problems in receiving contraceptive supplies. Among those who had problems, the largest percentages complained of difficulty in receiving salary and contraceptive supplies during the monthly meeting day, that thana stores sometimes did not have enough stock to adequately supply the FWAs, and difficulty in bringing supplies from the thana store to the work area/transportation inconvenience. Multiple responses were recorded (Table-3.5).

Table 3.5: Problems mentioned by FWAs in receiving contraceptive supplies

[Multiple response]

Problems	No. of FWAs	Percent
Difficult to receive salary and supplies during monthly meeting day	33	32.0
Contraceptives not available at thana store	27	26.2
Difficulty in transporting supplies	26	25.2
Supplies not received in proper and timely manner	14	13.6
Storekeeper absent/unavailable	8	7.8
Transportation cost is a problem	8	7.8
Other	8	7.8
Total FWAs who reported problem	103	

Problems were not associated with the specific DRS or the accessibility of the thana. However, in some thanas significantly more problems were reported than in others ($p<.000$) (Table-3.6).

Table 3.6: Problems reported by FWAs in receiving contraceptives by thana

Thana	No. of FWAs	Whether any problem	
		Yes	No
Fulchari	35	14.3	85.7
Gangachara	36	33.3	66.7
Rowmari	28	17.9	82.1
Pirganj	77	13.0	87.0
Pirgacha	62	19.4	80.6
Rajibpur	8	0.0	100.0
Sandwip	65	10.8	89.2
Sitakunda	40	27.5	72.5
Boalkhali	45	28.9	71.1
Rauzan	60	1.7	98.3
Kutubdia	23	47.8	52.2
Moheshkhali	33	48.5	51.5

When asked about specific problems under the present supply system, 39.6 percent of all FWAs said that they had a problem with storage space. Among them, many cited the lack of a trunk (36.9%).

Only 79 (15.4%) of all FWAs cited any problems with acquiring supplies according to their needs. Among them, the most often cited problems were non-availability of contraceptives at the thana store (40.5%) and supplies not issued according to demand (excess or shortage) (29.1%).

A total of 36 FWAs (7.0%) said that they experienced problems due to an excess of supplies issued to them. Among them, the main problems cited were storage difficulties (69.4%), transportation problems (38.9%), damage (27.8%), and expiry dates (16.7%).

Only 27 FWAs (5.3%) mentioned that the supplies they received were near the expiry date or were damaged. Those with this problem stated that clients would not accept expired goods (37.0%) and that distributing expired goods gave them disrepute (29.6%). They also stated that it was troublesome to deposit them (33.3%) to the thana store.

A total of 56 FWAs (10.9%) stated that they had problems preparing their indents. Among them, most said that preparing the indent on plain paper was troublesome (41.4%). Other specific problems included improper supply of forms (25.0%), difficulty in determining needs of clients due to lack of training (19.6%), and papers and pens were not supplied though purchased on arrangement (17.9%). Interestingly, only 8.9 percent said that the accounting and calculating procedures were difficult.

The majority of the FWAs submitted their indents to the FPI (85.0%). Some submitted them to the thana storekeeper (10.2%), and the rest either to the TFPO or another (4.9%).

Nearly all FWAs received their supplies from the thana storekeepers (87.1%). Only 11.7 percent received them from the TFPO, and 1.0 percent from the FPI. Among those receiving supplies from the thana storekeeper, the majority reported that they received them both timely and in proper manner (83.9%). Major reasons given for lack of timeliness or proper distribution on behalf of the storekeeper were the non-availability of stock at the thana store (63.2%), storekeeper often remained absent or too busy (31.6%), storekeeper intentionally did not distribute properly (9.2%), and strikes (7.9%). Among those receiving supplies from the TFPO or FPI, nearly all reported that the supplies were received timely and properly (94.9%).

A total of 124 (24.2%) FWAs reported that there had been at least one incident in the past six months where they had not been

supplied according to their indent. Among them, most cited insufficient supplies at the thana store (62.1%). Other common answers were the absence of the storekeeper (9.7%) and transport problems (7.3%).

Nearly a half (46.5%) of all FWAs stated that they faced problems in receiving supplies on the thana meeting day. Among these 238 women, 79.0 percent said that the meetings required them to stay too late causing them to return home at night. Many also said that it was difficult to complete all the necessary tasks on the meeting day (45.0%), e.g. attend meeting and receive supplies and salary. Fewer cited transport problems (15.5%) or any other problem (7.1%).

3.2.5. Stock status: Nearly a half (49.6%) of all FWAs had experienced a stock-out for any contraceptive during the past six months. A total of 62.1 percent of the FWAs in Chittagong DRS reported stock-outs in comparison to the 37.9 percent in Rangpur DRS ($p<.000$), and FWAs posted in the least accessible thanas reported more stock-outs (61.3%) than FWAs in the most accessible thanas (42.5%) ($p<.000$). Condoms and pills stock-outs were most common (Table-3.7).

Table 3.7: Stock-outs reported by FWAs in past six months by method

Method	Number of stock-outs FWAs	Percent
Any method	253	100.0
C-5	158	62.4
Condom	178	70.3

Most stock-outs were reported to have occurred only once. However, for condoms and pills, two stock-outs were more common (Table-3.8).

Table 3.8: Number of stock-outs in past six months

Method	Number of stock-outs	No. of FWAs	Percent
C-5	1	127	80.3
	2	28	17.8
	3	3	1.9
	Total stock-outs	**158**	**100.0**
Condom	1	151	84.8
	2	23	12.9
	3	3	1.7
	6	1	0.7
	Total stock-outs	**178**	**100.0**

About 35.0 percent of the most recent stock-outs of pills and condoms occurred within 30 days before the survey, 22.9 percent two months earlier, 15.7 percent three months earlier, and 14.6 percent four and five months earlier. Among those experiencing stock-outs, the major reasons cited by FWAs were lack of stock at the thana store (24.5%) and demand not shown due to previous stock (12.6%).

Field Investigators also collected stock status information directly from the FWA Record Keeping Books (RKB) for August through November 1994. C-5 and condom information is presented below (Table-3.9).

Table 3.9: Stock status of FWAs in different months from August to November 1994 based on RKB

Month of stock (MOS)	August		September		October		November	
	N	%	N	%	N	%	N	%
C-5								
0-stock (Stock-out)	31	6.1	27	5.3	27	5.3	20	3.9
>0 - <1 (Potential stock-out)	162	31.6	171	33.4	169	33.0	105	20.5
>1 - <2 (Under stock)	157	30.7	129	25.2	154	30.1	98	19.1
>2 - <3 (Adequate stock)	65	12.7	86	16.8	64	12.5	94	18.4
3+ (Over stock)	92	18.0	94	18.4	93	18.2	188	36.7
Total	507	100.0	507	100.0	507	100.0	505	100.0
Condom								
0-stock (Stock-out)	35	6.8	31	6.1	50	9.8	96	7.0
>0 - <1 (Potential stock-out)	128	25.0	145	28.3	146	28.5	107	20.9
>1 - <2 (Under stock)	81	15.8	85	16.6	90	17.6	90	17.6
>2 - <3 (Adequate stock)	60	11.7	56	10.9	52	10.2	47	9.2
3+ (Over stock)	148	28.9	136	26.6	125	24.4	150	29.3
Total	452	100.0	453	100.0	463	100.0	430	100.0

Note: 1. N = Number of FWAs
2. Stock status represents stock level at the beginning of the month
3. N differs in different months because of non-availability of records

When asked to comment on their stock status, 30.1 percent of FWAs stated that there had been a time that they did not submit an indent or pick up supplies because they had enough stock in hand. Other comments such as away on holiday or training (6.3%), or no goods at thana store (3.5%) were also made.

Most FWAs stated that supplies were properly received under the present supply system (87.9%). Among the 62 FWAs who did not agree, most complained that there was not enough stock at the thana store (54.8%). Others complained that the DRS did not supply the thana store properly (17.7%) and that the storekeeper was often unavailable (11.3%).

Most FWAs (65.0%) offered some type of solution to improve the present supply system. Of these 333 FWAs, the most common solutions were that supplies should be stored at the FWC and distributed from there (63.4%), supplies should be delivered to FWA homes (14.1%), and supply distribution should not be done on the same day as the monthly meeting.

3.2.6. Forms and report preparation: More than 12 different forms were mentioned by FWAs which were required to be filled out at the end of each month. Most mentioned the MIS Forms No. 1 and 4 (Table-3.10).

Table 3.10: Forms filled out by FWAs at the end of each month

[Multiple response]

Forms filled at end of month	No. of FWAs	Percent
MIS Form No. 1	481	93.9
MIS Form No. 4	224	43.8
Advance travel plan/work plan for each month	198	38.7
List of pregnant/lactating women and newborns	79	15.4
List of number of births and deaths	48	9.4
Table on distribution of monthly stock	38	7.4
Dalium estimating form	19	3.7
Report on money earned from condom sales	5	1.0
Report on tree planting	3	0.6
OPR Form	3	0.6
Others	63	12.3
Total	512	100.0

As many as 23.2 percent of FWAs stated that they had a problem in preparing these forms. When asked to describe these problems, multiple answers were allowed. The most commonly cited problems were the difficulty of preparing these forms on plain white paper (63.9%), office supplies must be obtained with own money (49.6%), and excessive time needed for preparation (26.9%) (Table-3.11). FWAs also provided solutions to these problems (Table-3.12).

Table 3.11: Problems cited by FWAs in preparing forms

[Multiple response]

Problems	No. of FWAs	Percent
Difficult to prepare on plain white paper	76	63.9
Office supplies, e.g. paper, pens, carbons, must be obtained with own money	59	49.6
Excessive time needed for preparation	32	26.9
Official forms are not supplied	21	17.6
Difficulty in determining needs	10	8.4
Difficulty in determining CPR in MIS Form No. 1	8	6.7
Total	119	100.0

Table 3.12: Solutions provided by FWAs for dealing with monthly reporting

[Multiple response]

Problems	No. of FWAs	Percent
Official forms should be supplied, e.g. MIS Form No. 1	70	58.8
Office supplies, e.g. papers, pens, carbon, etc. should be supplied	49	41.2
Official forms should be supplied properly	30	25.2
Training on preparing indent forms should be provided	15	12.6
Total	119	100.0

3.2.7. Storage of contraceptive supplies: More than a half of all FWAs (58.0%) reported that they had a trunk to store their contraceptives supplies in. Among those with a trunk, nearly all used them for this purpose (97.0%), and stated that their trunks were in good condition for use (95.6%).

Interviewers were asked to give their opinion regarding the storage

techniques of FWAs who did not possess trunks. Of these 215 FWAs, only 29.3 percent were assessed to have their supplies in a neat and orderly manner. A few were deemed secure (3.7%), and 16.7 percent were described as dirty and untidy. Only 7.4 percent kept their supplies on a table or in a bag or box.

3.2.8. Interviewers' impressions of FWAs: Nearly all the interviewers (98.8%) found the respondents to be cooperative, and most regarded various aspects of the interview to be satisfactory, e.g. record keeping (79.3%), storage technique (77.9%), respondent competency (83.8%), respondent provision of correct data (91.8%).

3.3. Interviews with FWVs

A total of 112 FWVs were in position and 85.0 percent of them could be interviewed.

3.3.1. Profile of respondents: FWV respondents were aged between 20 and 44 years, with most in the ages of 35 to 39 (41.1%) and 30 to 34 (28.4%). There were no significant differences between age groups and DRS areas or thanas. However, FWVs in the most accessible thanas tended to be older than the FWVs in the least accessible thanas (p=.033).

Most FWVs had served between 11 and 15 years (34.7%). Duration of FWVs service did not differ by DRS area or thana. However, differences were observed between service duration and thana accessibility (p=.016). FWVs in the most accessible thanas tended to have served longer than those posted in the least accessible ones (Table-3.13).

The majority of FWVs had achieved the Secondary School Certificate (SSC) (58.9%) (Table-3.14). No differences of educational level between DRS areas, thanas, or thana accessibility was found.

Table 3.13: Duration of service of FWVs by thana accessibility

Service duration (years)	Most accessible		Least accessible	
	No. of FWVs	%	No. of FWVs	%
1 - 5	7	11.9	14	38.9
6 - 10	16	27.1	3	8.3
11 - 15	21	35.6	12	33.3
16 - 20	14	23.7	7	19.5
21 and above	1	1.7	0	0.0
Total	59	100.0	36	100.0

Table 3.14: Educational achievement of FWVs

Educational achievement	No. of FWVs	%
SSC	56	59.0
HSC	31	32.6
Graduate and above	8	8.4
Total	95	100.0

3.3.2. Estimated need for contraceptives: FWVs were asked to estimate their monthly needs of contraceptives without looking at their records. These estimates were then compared to the average demand of the previous four months, a number calculated from their official records. Estimates for oral pills (C-5) ranged from the underestimate of 38 cycles to the overestimate of 294 cycles, with a mean of 32. Most FWVs (61.0%) estimated their need within 25 cycles of pills, 35.8 percent overestimated by 26 cycles or more, and 3.2 percent underestimated their need by more than 25 cycles.

FWV condom estimates were also compared to the four month average demand calculated from their official records. Estimates ranged from the underestimate of 114 pieces to the overestimate of 500 pieces, with a mean of 45. A total of 46.3 percent of FWVs estimated their condom need to within 25 pieces, 47.4 percent overestimated their need by over 26 pieces, and 6.4 percent underestimated their need by 26 pieces or more.

Estimates for IUDs (Copper-T) ranged from the underestimate of 10 to the overestimate of 46, with a mean of six. Most estimated their need within five IUDs (59.0%), 18.9 percent overestimated above five but below ten, 21.1 percent overestimated above ten, and 1.1 percent underestimated by more than 5.

Estimates for Depoprovera ranged from the underestimate of 14 injections to the overestimate of 161, with a mean of 26. Most estimated their demand within 25 injections (67.4%), 13.7 percent overestimated between 26 and 50 injections, and 19.0 percent overestimated above 50. There were no underestimates of more than 25 injections.

Estimates for Noristerate ranged from the zero to the overestimate of 90, with a mean of six. Most estimated their need within five injections (70.5%), 12.6 percent overestimated above five but below ten, and 16.8 percent overestimated above ten. None underestimated by more than 5 injections.

3.3.3. Contraceptive receipt: When FWVs were asked how requests were placed for contraceptive supplies, the majority stated that they submitted an indent (75.8%). Though multiple answers were allowed, none of the other modes were as popular (Table-3.15).

Table 3.15: Mode of request for contraceptive supplies

[Multiple response]

Mode of request	No. of FWVs	Percent
Indent	72	75.8
MIS Form 3	18	18.9
Issue voucher	14	14.7
Verbal request from Thana Storekeeper	5	5.3
Monthly stock Form	3	3.1
MIS Form 4	2	2.1
Other	2	2.1
Total	95	100.0

Only 20.0 percent of FWVs stated that they had any problems in receiving contraceptive supplies. Among those who had problems, the majority complained of stock-outs at the thana store (52.7%). Multiple responses were recorded (Table-3.16).

Table 3.16: Problems faced by FWVs in receiving contraceptive supplies

Problems	No. of FWVs	Percent
Stock-out at thana store	6	52.7
Time consuming to bring supplies from thana store to work site	3	15.8
Transportation of supplies is inconvenient	2	10.5
Inadequate supplies received	2	10.5
Costly to transport supplies	2	10.5
Total	19	100.0

Problems were not associated with the specific DRS or the accessibility of the thana. However, in some thanas, significantly more problems were reported than in others (p<.014) (Table-3.17).

Table 3.17: Problems reported by FWVs in receiving contraceptives by thana

Thana	No. of FWVs	Whether faced any problem	
		Yes	No
Fulchari	7	14.3	85.7
Gangachara	4	75.0	25.0
Rowmari	5	20.0	80.0
Pirganj	11	9.1	90.9
Pirgacha	9	33.3	66.7
Rajibpur	3	0.0	100.0
Sandwip	9	11.1	88.9
Sitakunda	10	10.0	90.0
Boalkhali	11	18.2	81.8
Rauzan	14	0.0	100.0
Kutubdia	6	33.3	66.7
Moheshkhali	6	66.7	33.3

When asked about specific problems under the present supply system, 52.6 percent of all FWVs said that they had a problem with storage space. Most of those with storage space problems (56.0%) cited the lack of an almirah, nearly a third (32.0%) complained of no official storage site because they had no proper office e.g. an FWC or government clinic, and 30.0 percent said they did not have enough space in their almirah.

Only 22 (23.2%) of the FWVs mentioned any problems with acquiring supplies according to their needs. Among them, the most often cited problems were non-availability of contraceptives at the thana

store (36.4%) and supplies were not issued as per their indent (27.3%). Only three FWVs explicitly stated that all supplies were not issued as per their indents (13.6%).

A total of 9 FWVs (9.5) said that they experienced problems due to supplies of expiry date and damaged or unusable commodities. Among them, four said that problems occurred when they tried to return expired/unusable supplies to the thana store and two said that clients did not accept expired supplies.

A total of 13 FWVs (13.7%) stated that they had problems in preparing indents. Among them, most referred to the short supply of official forms which forced them to prepare indents on plain paper (76.9%). Other specific problems included untimely supply of MIS forms (15.4%), lack of training in MIS form use (7.7%) , pens and paper not supplied (7.7%), and difficulty in preparing the indent without help (7.7%).

Nearly all FWVs submitted their indents either to the TFPO (48.4%) or to the thana storekeeper (49.5%). Most felt that the person to whom they submitted their indents supplied them as needed (78.9%). Those who felt that they did not receive the correct amounts of supplies stated that the thana store did not have adequate supplies to distribute (85.0%). One FWV said that sometimes the storekeeper did not distribute the supplies because he had other business to attend to. One FWV said that she was given expired supplies, and one said that she was not supplied as per her indent because of errors in her indent.

Nearly all FWVs received their supplies from the thana storekeepers (90.5%). Only 8.4 percent received them from the TFPO, and 1.1 percent from another. The majority reported that they received their supplies in a timely and proper manner (80.0%). Among the 13 who said they did not, shortages at the thana store were again cited as the main problem by 8 FWVs (61.5%), the absence of the

storekeeper was mentioned by 5 FWVs (30.8%), and three (23.1%) said that the storekeeper intentionally did not provide the supplies as needed.

A total of 15 (15.8%) FWVs reported that there had been at least one incident in the past six months where they had not been supplied according to their indent. Among them, 10 (66.7%) explained that this occurred due to insufficient supplies at the thana store. Two FWVs said the problem was due to the storekeepers taking leave or miscalculated demand or for unknown reasons.

Nearly a half (47.4%) of all FWVs stated that they faced problems in receiving supplies on the thana meeting day. Among these 45 women, most (80.0%) said that the meetings required them to stay too late or after office hours, forcing them to return home at night. Many also said that it was difficult to complete all the necessary tasks on the meeting day (40.0%). e.g. attend meeting and receive supplies and salary. Fewer complained that the carrying cost was not reimbursed (4.4%) or any other problem (4.4%).

3.3.4. Stock Status: A total of 43.2 percent of FWVs had experienced a stock-out for any contraceptive during the past six months. Stock-outs were reported by more FWVs in some thanas, e.g. Gangachara, Rowmari, Pirgacha, Kutubdia and Moheshkhali, than in others (p=.001). Most FWVs who had a stock-out said that the exhausted item was Depoprovera (63.4%), but pill and condom stock-outs were also mentioned in relatively high frequencies (Table-3.18).

Table 3.18: Stock-outs reported by FWVs in past six months by method

Method	Number of FWVs reporting stock-outs	Percentage
Any method	41	100.0
C-5	17	41.5
Condom	18	43.9
Cu-T	6	14.6
Noristerate	7	17.1
Depoprovera	26	63.4

Most stock-outs were reported to have occurred only once (Table-3.19).

Table 3.19: Number of stock-outs in past six months by method

Method	Number of stock-outs	No. of FWVs	Percent
C-5	1	15	88.2
	2	2	11.8
	Total stock-outs	**17**	**100.0**
Condom	1	15	83.4
	2+	3	16.6
	Total stock-outs	**18**	**100.0**
Cu-T	1	5	83.3
	2+	1	16.7
	Total stock-outs	**6**	**100.0**
Noristerate	1	5	71.4
	2+	2	28.6
	Total stock-outs	**7**	**100.0**
Depoprovera	1	22	84.6
	2+	4	15.4
	Total stock-outs	**26**	**100.0**

All of the most recent stock-outs were said to have occurred in the month prior to the base line survey. Among those with stock-outs, the largest percentage (29.3%) explained that thana stores did not have adequate supplies to distribute, 22.0 percent said that they did not present their demand, 14.6 percent stated they had an increase in their demand compared to their supply. 9.8 percent said the storekeeper was absent so supplies were not distributed, and three FWVs (7.3%) said that too few supplies were given to them and/or they did not receive the supplies, and/or the storekeeper did not provide them.

Field Investigators also collected stock status information directly from FWV records for August through November 1994. This information is presented below (Table-3.20).

Table 3.20: Stock status of FWVs in different months from August to November 1994 based on RKB

Months of stock (MOS)	August		September		October		November	
	N	%	N	%	N	%	N	%
C-5								
0-Stock (Stock-out)	3	3.4	5	5.6	3	3.3	2	2.3
>0 - <1 (Potential stock-out)	15	17.0	22	24.7	11	12.1	4	4.6
>1 - <2 (Under stock)	15	17.0	13	14.6	17	18.7	18	20.7
>2 - <3 (Adequate stock)	20	22.8	14	15.7	12	13.2	12	13.8
3+ (Over stock)	35	39.8	35	39.4	48	52.7	51	58.6
Total FWVs	**88**	**100.0**	**89**	**100.0**	**91**	**100.0**	**87**	**100.0**

Cont. of Table-3.20Months of stock (MOS)	August		September		October		November	
	N	%	N	%	N	%	N	%
Condom								
0-Stock (Stock-out)	2	3.4	5	7.8	3	4.4	5	8.1
>0 - <1 (Potential stock-out)	14	23.7	17	26.6	19	27.5	9	14.5
>1 - <2 (Under stock)	9	15.2	9	14.1	10	14.5	13	21.0
>2 - <3 (Adequate stock)	6	10.2	5	7.8	8	11.6	6	9.7
3+ (Over stock)	28	47.5	28	43.7	29	42.0	29	46.8
Total FWVs	**59**	**100.0**	**64**	**100.0**	**69**	**100.0**	**62**	**100.0**
Cu-T								
0-Stock (Stock-out)	0	0.0	1	1.2	0	0.0	1	1.3
>0 - <1 (Potential stock-out)	8	9.9	7	8.2	12	14.6	3	3.9
>1 - <2 (Under stock)	7	8.6	11	12.9	11	13.4	12	15.6
>2 - <3 (Adequate stock)	13	16.0	20	23.5	12	14.6	7	9.1
3+ (Over stock)	53	65.5	46	54.2	47	57.4	54	70.1
Total FWVs	**81**	**100.0**	**85**	**100.0**	**82**	**100.0**	**77**	**100.0**

Months of stock (MOS)	August		September		October		November	
	N	%	N	%	N	%	N	%
Depoprovera								
0-Stock (Stock-out)	4	4.4	7	7.7	4	4.3	2	2.2
>0 - ≤1 (Potential stock-out)	37	41.1	29	31.5	28	30.1	20	21.5
>1 - <2 (Under stock)	26	28.9	21	22.8	26	28.0	27	29.0
>2 - <3 (Adequate stock)	11	12.3	13	14.1	13	14.0	11	11.8
3+ (Over stock)	12	13.3	22	23.9	22	23.6	33	35.5
Total FWVs	**90**	**100.0**	**92**	**100.0**	**93**	**100.0**	**93**	**100.0**
Noristerate								
0-Stock (Stock-out)	1	3.3	3	10.0	0	0.0	4	13.8
>0 - ≤1 (Potential stock-out)	1	3.3	1	3.3	3	11.1	3	10.3
>1 - <2 (Under stock)	5	16.7	4	13.3	4	14.8	1	3.4
>2 - <3 (Adequate stock)	6	20.0	4	13.3	4	14.8	2	6.9
3+ (Over stock)	17	56.7	18	60.0	16	59.3	19	65.6
Total FWVs	**30**	**100.0**	**30**	**100.0**	**27**	**100.0**	**29**	**100.0**

Note: 1. N = Number of FWVs
2. Stock status represents stock level at the beginning of the month
3. N differs in different months because of non-availability of records

When asked to comment on their stock-outs, 36.8 perecent of all FWVs stated that there had been a time that they did not submit an indent or pick up supplies because they had enough stock in hand. Other comments were also made such as storekeeper had stock-out (4.2%), away on training (3.2%), and did not submit indent (3.2%). Most FWVs stated that supplies were properly received under the present supply system (85.3%). The 14 FWVs who did not agree made various complaints. A half of them complained that there was not

enough stock at the thana store, three (21.4%) complained that clinical and official items were not properly supplied, three complained that the storekeeper was negligent, and two said that there was no storekeeper.

Of all FWVs, 66.3 percent offered some type of solution to improve the present supply system. Among them, the most common suggestions were that supplies should be distributed to the FWC level (54.0%), supplies should be received as per indent/demand (15.9%), distribution of supplies should not be done on the same day as the monthly meeting (12.7%), and transportation costs of supplies should be reimbursed (6.3%).

3.3.5. Forms and report preparation: More than 12 different forms were mentioned by FWVs which were required to be filled out at the end of each month. Most mentioned the MIS Forms No. 3 and 4 (Table-3.21).

Table 3.21: Forms filled out by FWVs at the end of each month

[Multiple response]

Forms filled	No. of FWVs	Percent
MIS Form No.3	87	91.6
MIS Form No. 4	31	32.6
Advance schedule for satellite clinics	23	24.2
First/second fortnightly work schedule	22	23.2
MCH advance work schedule	16	16.8
Family planning acceptors monthly report/advance work schedule	14	14.7
Monthly advance work schedule/ performance reports	13	13.7
Advance monthly itinerary	12	12.6
MSR Form	8	8.4
Form 7B	7	7.4
Indent preparation on white paper	6	6.3
Others	16	16.8
Total	**95**	**100.0**

A total of 33.7 percent of all FWVs stated that they had a problem in preparing these forms. When asked to describe these problems, multiple answers were allowed. Of these 32 FWVs, the most commonly cited problems were difficulty in preparing indents on plain white paper (50.0%), office supplies must be obtained with own money (31.3%), and forms not supplied as required (21.9%) (Table-3.22). FWVs also provided solutions for these problems (Table-3.23).

Table 3.22: Reported problems in filling the forms

[Multiple response]

Problems	No. of FWVs	Percent
Trouble in preparing indent on plain white paper	16	50.0
Office supplies, e.g. paper, pens, carbons, must be obtained with own money	10	31.3
Forms not supplied as required	7	21.9
Many types of forms must be prepared by hand	3	9.4
Difficulty in preparing reports due to lack of training	3	9.4
Others	2	6.3
Total	**32**	**100.0**

Table 3.23: Solutions suggested for dealing with monthly reporting

[Multiple response]

Suggested solutions	No. of FWVs	Percent
All types of official forms should be supplied	13	40.6
Supplies of required number of forms should be ensured	11	34.4
Office materials should be supplied, e.g. pens, paper, carbon, etc.	9	28.1
Training on preparing forms should be provided	4	12.5
Sufficient number of MIS forms should be provided	4	12.5
Others	2	6.2
Total	**32**	**100.0**

3.3.6. Storage of contraceptive supplies: Most of the FWVs (66.3%) had an almirah to store in their contraceptives supplies. Among them, 84.1 percent kept all of the contraceptives in the almirah,

63.5 percent arranged them in an organized way, 85.7 percent had clean almirahs, and 55.5 percent had sufficient space.

Only 9.5 percent of FWVs stored their supplies in cartons, 6.3 percent had them scattered on a table and in a carton, 2.2 percent in polythene bags, and 1.1 percent kept supplies in a trunk. Only 3.2 percent had the items stored in a manner termed insecure and/or unsatisfactorily e.g. on a shelf or rack.

3.3.7. Interviewers' impressions of FWVs: Nearly all the FWVs (98.8%) were found to be cooperative, and most regarded various aspects of the interview to be satisfactory, e.g. record keeping (72.6%), storage technique (68.4%), respondent competency (84.2%), respondent provision of correct data (88.4%).

3.4. Interviews with TFPOs and Thana Storekeepers (SKs)

3.4.1. Profile of respondents: The age of TFPOs ranged from 30 to 53 years, with median 38. Length of service ranged from six months to 28 years, with median 12. Seven out of the 11 TFPOs had been in the present thana for two years or more. All but one had studied at the graduate level or above. The TFPOs of Pirganj and Boalkhali were the eldest (52 years each) and had served the longest (28 and 27 years).

The age of the Thana Storekeepers (SKs) ranged from 30 to 55 years, with a median of 46.5 years. Length of service ranged from 13 days to 27 years, with median 2 years. The SK of Rowmari was the oldest storekeeper (55 years) with the longest total length of service (27 years). Duration of service in the present thana ranged from approximately one month (Boalkhali) to 17 years (Kutubdia). Ten of the 12 SKs had the educational qualification of HSC, one had SSC and one had studied at the graduate level.

All TFPOs and eight SKs had received training in logistics

management. The durations of these training courses ranged between three and ten days and were received from JSI, ACPR, PIACT, VTTI, FWVTI and the DFP.

3.4.2. Unions and personnel in area and additional responsibilities of storekeepers: The number of unions in the respective thanas where TFPOs and SKs were interviewed ranged from three to 15, with median nine. The number of FWAs per thana ranged from 13 to 77, with median 49. The number of FWVs per thana ranged from two to 18, and the median was nine. The number of FWCs per thana ranged from one to 11, with median 5.

Most SKs (9) were responsible for duties other than store maintenance. The most common additional task was accounts work (Table-3.24).

Table 3.24: Storekeeper's duties other than store maintenance

[Multiple response, N=12]

Other duty	Frequency
Accounts work	4
Prepare monthly progress report	3
Mid-wife training	1
Do tasks of FPI	1
Do tasks of TFPO	1
Do tasks of FWA	1
Monitor liaison with other office	1
Satellite clinic work	1

3.4.3. Contraceptive receipt: SKs were asked about quantities of supplies distributed in August, September and October of 1994. About a half of the SKs could not supply information of receipt for any given month, so a two or three monthly average was not possible. However, distribution information was usually available

from most SKs. The three month average distribution for C-5 from 11 SKs was 8,901, with a minimum of 2,640 (Kutubdia) and maximum of 17,700 (Pirganj). For condom, the three month average distribution from 11 SKs was 7,509 pieces, with minimum 4,210 (Rowmari) and maximum 15,756 (Sitakunda). For Depoprovera the three month average distribution from 10 SKs was 715, with minimum 197 (Kutubdia) and maximum 1,487 (Pirganj). For IUDs the three month average distribution from 5 SKs was 137 pieces, with minimum 100 (Rauzan) and maximum 192 (Sandwip).

TFPOs were asked how contraceptive supplies were received from the DRS. Six out of 11 said that they followed both push and pull systems, four only mentioned indent or pull system, and one said he was sometimes supplied by the push system and sometimes after filling out MIS form number four. The SKs responded to this question slightly differently; three of the 12 said that they followed both push and pull systems, eight referred to indent only, two said push system only, and one only mentioned form 7B MSR.

Most TFPOs and SKs reported at least one problem in procuring supplies for the thana store. Of the eight TFPOs and nine SKs who mentioned problems, most (5 of each) referred to transportation problems, other common problems were inadequate stock at DRS, supplies not received in timely manner or as per indent, and storage problems. When probed about specific problems faced with regard to the supply, similar responses were given. Five TFPOs and two SKs also stated that supplies were sometimes given in excess of demand. Four TFPOs and four SKs (not of same thanas) also mentioned that they were sometimes supplied with expired commodities; all four of the SKs were from thanas of low accessibility.

All but one TFPO and two SKs complained of inadequate storage space. Most SKs specifically stated that they did not have enough

room to accommodate their stock, other complaints were the lack of furniture (almirah, rack), dunnage, and government store. The most common solutions to these problems were that the government or department should arrange for transportation of the supplies or allocate money for this purpose and that supplies should be issued as per the indents in a timely way.

Five TFPOs and five SKs reported a stock out or near stock out of contraceptive supplies in the six months prior to the pre-survey. Three SKs reported condom stock-outs, one C-5, one Cu-T, and one Depoprovera and Noristerate. Reported stock-outs did not seem to be related to thana, district, accessibility of thana or DRS. The reason for condom stock-outs stated by SKs was non-receipt of supply from DRS. The reason for the C-5 and Depoprovera or Noristerate stock-outs was delay in receiving them from DRS.

All TFPOs and 11 SKs stated that special indents were placed to the DRS if stock-outs occurred, but less than half of the TFPOs and SKs said that the supplies were then given as per the indent. The main reason for this was thought to be inadequate stock in the RWH/DRS. Two SKs of the less accessible thanas also stated that the reason for this was transportation delays and bad communication.

3.4.4. Supplying FWCs: All TFPOs and 11 SKs said that FWCs were supplied as per the indent/demand of the FWVs. Some also mentioned that sometimes FWVs were supplied as per a verbal indent and through issue voucher. When asked if they faced any problem in providing the requested supplies, five TFPOs and five SKs said that they did. Among them, most said that supplies could not be given due to stock-out or inadequate stock in the store.

When asked what they did to supply FWCs if the stock level dropped below one month's supply at the thana store, a variety of answers were given (Table-3.25).

Table 3.25: Supply procedure to FWCs when stock level falls below one month as reported by TFPOs and SKs

[Multiple response]

Reported procedure	Frequency TFPO (N=11)	Frequency SK (N=12)
All the stock of the thana store is distributed to FWAs/FWVs to maintain the field demand	2	1
FWV/As given an average stock based on availability	1	0
Given some supply on ad-hoc basis to operate	2	2
Given less than the indent, adjustments to indents made (type of adjustments not specified)	0	3
Try to get supply early from above	1	0
In case of stock-out supply cannot be made	1	0
Indent/communicate to DRS	1	2
Bring supply from DRS on emergency basis	0	2
Advise to take loan from those who have relatively more stock	1	0
Not applicable/problem not faced	4	3

There were many different suggestions from both TFPOs and SKs to correct the problems in supplying contraceptives to FWCs. They included continuous maintenance of adequate stock, supply of stock from DRS based on demand, supply of stock from DRS based on the push system, maintaining a separate store room at the thana level, supplying commodities on a day other than that of the monthly meeting and salary payment, no supply to be given without indent, allowing one week between receipt of FWA/V indent and issuance of stock, and providing training on receipt, supply and storage to FWVs.

The majority of TFPOs and SKs reported that FWVs followed supply procedures correctly by regularly submitting their monthly indents and not requesting more supplies than actually required. However, they were divided when asked if the FWVs came to thana headquarters every month on the supply/monthly meeting date to receive supplies.

Most TFPOs said they did. Most SKs said they did not and some said they did not come because of negligence.

3.4.5. Supplying FWAs: Eight TFPOs and all SKs reported that FWAs were supplied according to a pull or indent system. Two of the TFPOs and two SKs also mentioned that a push system was sometimes used. Two other TFPOs stated that the FWAs were supplied on information in Form 4A and that this was also based on stock at the thana store.

Five TFPOs and five SKs said that they faced at least one problem in issuing supplies according to indent. Among TFPOs, all but one said that the problem was due to inadequate stock. Among SKs, all but one said that their problem was that the indent forms were not available from the DRS.

The majority of TFPOs and SKs reported that FWAs followed supply procedures correctly by regularly submitting their monthly indents, regularly visiting the thana health complex on the supply or monthly meeting date and not requesting more supplies than the actual requirements.

About a half of all TFPOs and SKs reported problems in distributing supplies to FWAs. Three TFPOs referred to inadequate stock in the thana store and three of the SKs referred to problems caused by conducting the monthly meeting and distribution on the same date. All other problems were mentioned by one TFPO or one SK each and included SK not trained, indents not given properly, FWA absent on distribution day, non-reporting, space problems in thana store, FWAs not wanting to receive supplies as per system due to storage problems, dissatisfaction with not receiving more supplies, problem of receiving the condom sales proceeds due to product distribution at the same time, and too much work to be done without help. To solve their problem, three TFPOs suggested that supplies to all levels be ensured. Individual TFPOs also suggested training of the

SK, having field workers submit their indents in time to receive supplies on the specified day and maintaining a separate storeroom at the thana headquarters. Four SKs recommended that a date other than that of the monthly meeting be earmarked for distribution of supplies. Individual SKs also suggested that training be given on collection, storage and distribution of supplies, storage facilities be developed, and an assistant be provided.

3.4.6. Thana stores: Most TFPOs and SKs reported that the time allowed for supplying contraceptives on the monthly meeting days was insufficient. They said that there were too many tasks to complete in too short a time, e.g. monthly meeting, salary payment, supply distribution and checking of indents. Some added that distribution sometimes continued into the evening and that this was inconvenient for the FWVs/As.

Seven TFPOs and five SKs found the present system of receipt/supply to be appropriate. Among those who did not, two TFPOs said neither push nor pull system alone was appropriate. Two TFPOs and three SKs said that the system was not appropriate due to inadequate availability of stock at the DRS.

Nine TFPOs and eight SKs offered their suggestions to make the system more effective. The most common responses from TFPOs were switching to a push system and maintenance of adequate stock at the DRS. The largest response from SKs was to properly implement the present system (Table-3.26).

Table 3.26: Suggestions of TFPOs and SKs to make the present system more effective

[Multiple response]

Suggestions	Frequency TFPO (N=9)	Frequency SK (N=8)
Use push system	3	0
Maintain adequate stock at DRS	3	0
Arrange transport of supplies	2	0
Provide a separate allowance for transport/ carrying supplies	2	0
Supply additional stock (on special arrangement) during the monsoon season	2	0
Fill vacant storekeeper posts	1	0
Institute push system from thana to field and pull-push from thana to DRS	1	0
Distribute supplies on different date other than thana meeting day	1	0
Properly implement present push and pull system	0	4
FWAs should receive supplies from FWCs through the FPI instead of through thana/distribute supplies to FWVs/As at the union level	0	2
Training on present system of collection, storage and distribution	0	1
Adequate supplies for several months should be sent to the thana level	0	1
Additional stock should be supplied before the monsoon	0	1
The storage facility should be reorganized according to commodities	0	1
Provision of security guard, loader, furniture, etc.	0	1

Note: 3 TFPOs and 4 SKs did not suggest anything.

3.4.7. Reports prepared by TFPOs and SKs at the end of each month: TFPOs and SKs stated they filled out a number of different forms at the end of each month. Form 7B (MSR) was the most frequently cited by both (Table-3.27).

Table 3.27: Forms filled out by TFPOs at the end of each month

[Multiple response]

Form name	Frequency TFPO (N=11)	Frequency SK (N=12)
Form 7B (MSR) contraceptive	9	12
MIS Form 4	5	5
Monthly report	4	2
Sales proceeds of condoms	3	2
MCH contraceptives 7B	2	0
CYP report	2	0
Fortnightly report	2	1
29 item special report	2	0
Death and birth statistics	1	0
List of pregnant women	1	0
Data back check statement	1	0
27 item form	0	5
18 item form	1	1
MCH (not specified)	0	1
CAR	0	1
Indent voucher form	0	4
Report on medicine	0	1
Unknown others	2	0

Only three TFPOs reported problems in preparing the reports. They complained of delays in receiving reports from subordinates, incomplete reports from subordinates and shortage of printed forms. To solve these problems, two suggested that adequate forms be supplied and one said that training on reporting should be provided.

A larger proportion of SKs (5 to 12) reported having problems with the forms. The specific problems mentioned included delays in receiving reports (2), reports of FWV/As contained mistakes (2),

the spaces on MIS Form 4 were too narrow (2), and shortages of forms (1). To solve these problems, SKs suggested that FWVs and FWAs should receive training in preparing MIS Forms 2 and 3 (2), reports should be submitted in a timely manner (2), adequate supply of forms should be available (1), and the MIS forms should be improved or the lines made more spacious (2).

TFPOs and SKs provided a number of suggestions on how the MIS could be improved. Training of field workers was the most frequently cited response (Table-3.28).

3.4.8. Observations on thana stores: Of the 12 thana headquarters visited, two did not have store rooms. The remaining ten stores were measured by field investigators which ranged from 70 to 360 square feet. The mean measurement was 134 sft. and the median 100 square feet. Only two of the field investigators found the storage area to be adequate. Seven stores were termed clean and organized and eight were well ventilated. The area where supplies were kept was viewed to determine utilization of the existing storage capacity. Three of the storage areas were full, three were more than half full, three were one half, two were less than half, and with one a judgement could not be made. Five of the field investigators concluded that the storage area was small.

3.4.9. Interviews' impressions of TFPOs and SKs: All TFPOs were found to be competent enough to carry out their responsibilities and considered to have provided factual information to the interviewers. All but one of the TFPOs were found to be cooperative, and most were found to keep satisfactory records (8), storage quantities and conditions (9).

Most SKs were also found to be competent (9 to 12) enough to carry out their responsibilities and all were considered to have provided factual information to the interviewers. All were found to be cooperative, the majority were found to keep satisfactory records (11), and most kept adequate stock (9).

Table 3.28: Suggestions of TFPOs and SKs on how the MIS could be further improved

[Multiple response]

Suggestion	Frequency TFPO (N=11)	Frequency SK (N=12)
Arrange training for FWAs and others	3	4
Monitor program continuously/supply information to review progress at thana & district level	3	1
Ensure supply as per demand/indent	2	0
Provide money for supplying commodities	2	0
Do not supply expired commodities	1	0
Introduce computer system at the thana level	1	0
Separate the ligation form	1	0
Develop consciousness on the importance of MIS	0	1
Simplify MIS forms/design one reporting form incorporating all necessary information in to it	2	3
Maintain adequate supply of MIS Form 4	0	1
No suggestion/present MIS is O.K.	3	4

SECTION FOUR

INTERIM STOCK LEVEL SURVEYS WITH FWAs AND FWVs

4.1. Introduction

Two Interim Stock Level Surveys (ISLS) were carried out in the 12 selected thanas, six in Chittagong DRS and six in Rangpur DRS. During the ISLS, information was collected from approximately one third of all FWAs and FWVs. The instrument was designed to obtain information about actual stock levels of field workers. Information was gathered from the quantities of supply reported in official records and physical count by field investigators. Workers were also asked to give their opinions about their respective stock distribution system (experimental and existing), and field investigators noted observations about worker record keeping status and storage technique. The first ISLS was carried out from 23 through 30 March 1995 and the second from 23 through 30 May 1995. During both ISLS, information was collected simultaneously from Chittagong and Rangpur DRSs.

The ISLS was undertaken specifically to gain further insight into the actual stock levels of field workers with respect to the different experimental cells.

- Method-I: A push system where the Thana Storekeeper uses the month before last distribution figure of the worker, multiplies it by three and subtracts the recorded current balance of the FWA or FWV. The resulting number is the basis on which supplies are then distributed to fieldworkers, but is subject to availability and packaging restrictions.

- Method-II: A push system where the Thana Storekeeper calculates the workers average distribution of the past 12 months, multiplies it by three and subtracts the recorded current balance of the FWA or FWV. The resulting number is the basis on which supplies are then distributed to fieldworkers, but is subject to availability and packaging restrictions.

- Method-III: The control/existing contraceptive distribution system of the Directorate of Family Planning.

Approximately two thirds of the unions from each selected thana were sampled taking two FWAs and each FWV from each sampled union included in the ISLS. During both ISLS, independent samples of FWAs were taken. A total of 143 FWAs were scheduled for interview. The number actually interviewed was 141 in the first round and 139 in the second (Table-2.2).

For reasons beyond the control of the investigators, Rowmari thana did not follow Method-II as planned. Though the Thana Storekeeper had been trained, the TFPO did not attend the training. Follow-up efforts were made to encourage the TFPO and Thana Storekeeper to follow the new system, but no changes were made. Hence, the analysis of experimental methods included all thanas excluding Rowmari.

4.2. Survey with FWAs

4.2.1. Average distribution of previous two months: An average of two months distribution figures for the two previous months was calculated using figures in official FWA records. The mean distributions for the first and second ISLS were similar. In the first ISLS, the mean distribution for condoms was 156 pieces and for pills 175 cycles. In the second ISLS it was 146 for condoms and 187 for pills. The distribution range in the first ISLS was zero to 738 for condoms and 24 to 552 for pills. The range in the

second ISLS was zero to 642 for condoms and zero to 632 for pills.

4.2.2. Stock status: Using FWA records, the amount of stock in months of stock (MOS) available immediately after receiving supplies from the thana store was calculated by adding the month's opening balance and amount of contraceptives received during the month and then dividing by the average distribution over the previous two months. During the two ISLS, condom stocks increased while pills remained about the same. For FWAs in the first ISLS, the mean condom MOS was 3.9, with range zero to 46.0. The mean pill MOS was 2.78, with range zero to 8.4. For FWAs in the second ISLS, the mean condom MOS was 4.8, with range zero to 86. The mean pill MOS was 2.72, with range zero to nine.

Stock status on the date of the field investigators' visit was determined by two means: (1) using the FWA records, and (2) physically counting the pills/condoms in hand. Stock status mean and range determined by these two methods were the same with the exception of condom stocks in the second ISLS. For the first ISLS, the mean condom MOS was 3.0 with range 0.0 to 46.0, and the mean pill MOS was 1.9, with range 0.0 to 6.4. For the second ISLS, the pill had mean 1.9 and range 0.3 to 8.6. However, for condom the mean calculated from FWA register figures was 4.8, with range 0.0 to 85.7, and the mean from the physical count was 3.0 with range 0.3 to 66.0.

In the first ISLS, differences between the FWA register balance on the date of visit and physical counting[1] were observed in about 25 percent of all FWAs. For condoms, the difference ranged from one to 134 pieces, with mean 25. For pills, the difference ranged from one to 265 pieces, with mean 27. In the second ISLS, differences between the FWA register balance on the date of visit and physical counting were less. For condoms, only 11 percent of FWAs were found to have a difference between the register and physical

[1]Only usable stocks were counted

count. For pills, it was 16 percent. FWAs gave a variety of

reasons to explain their having excess stock in hand. The most popular reasons were: distribution number in register was incorrectly written too high and actual distribution was less; wrote distribution figure in register before actual distribution was carried out; clients returned condom because they were now taking injectable; and could not say. There were also a variety of reasons to explain shortages of stock. The more popular ones included: forgot to enter distribution in register; damage by children; some supplies given to local volunteers; damaged due to expiry; and unknowingly supplied extra to clients.

4.2.3. Stock status of condom (physical count) by thana, DRS area, accessibility and experimental method: In the first ISLS, there were six condom stock-outs. Most of them occurred in Rowmari where four of the six FWAs were found with zero condoms. Additionally, one stock-out was found in Rauzan and one in Moheshkhali. A total of 24 potential stock outs were observed, the greatest numbers of which were in Sitakunda (5), Pirganj (4) and Moheshkhali (4). There were 43 FWAs who were found with overstock of condoms, the greatest frequencies being in Pirganj (11), Boalkhali (8), and Rauzan (8).

In the second ISLS there were 10 condom stock-outs. Most of them occurred in Moheshkhali (5), two were in Sitakunda, and one each in Rowmari, Rauzan and Pirgacha. A total of 48 potential stock-outs were observed in all thanas but Rowmari. Most occurred in Rauzan (12), Sandwip (9), Sitakunda (8), and Pirganj (7). Overstock was found with 28 FWAs, in all thanas but Sandwip, Boalkhali and Moheshkhali. Pirganj FWAs had the most overstock situations (7), Pirgacha had (4), Fulchari and Rauzan three each, Gangachara, Rowmari and Kutubdia two each, and Rajibpur, Sitakunda two each.

In the first ISLS, stock status between DRS areas was similar, but

the greatest percentages of FWAs in Rangpur DRS had adequate stock (26.2%) or overstock (34.4%). In Chittagong, the greatest percentages of FWAs had low stock (33.3%) or overstock (28.2%). The situation changed in the second ISLS where the greatest percentage of FWAs in Rangpur DRS area had overstock (29.8%) or low stock (29.8%). In Chittagong DRS, the greatest percentage of FWAs had a potential stock-out (47.3%), and 18.9 percent had low stock (Table-4.1).

In the first ISLS, all but one of the six condom stock-outs occurred in thanas of low accessibility. The proportions of FWAs with potential stock-outs, low stock and adequate stock were similar, but FWAs in areas of high accessibility more frequently had overstock (40.9%) than those in low accessible areas (13.7%). In the second ISLS, condom stock-outs numbered six (12.0%) in the poorly accessible thanas and four (4.9%) in the better. The proportions of FWAs with potential stock-outs was slightly greater for the more accessible thanas (38.3%) than the less accessible ones (32.0%). Low stock was approximately the same (22.0% poor; 24.7% high), as was adequate stock (16.0% poor, 14.8% high) and overstock (18.0% poor, 17.3% high).

Table 4.1: Stock status of condom with FWAs on the date of visit by DRS based on physical count

[Figures in percentage]

Months of stock (MOS)	Rangpur DRS		Chittagong DRS	
	1st ISLS	2nd ISLS	1st ISLS	2nd ISLS
0-stock Stock-out	6.6	3.5	2.6	10.8
>0 - ≤ 1 (Potential stock-out)	14.8	21.1	19.2	47.3
> 1 - ≤2 (Under stock)	18.0	29.8	33.3	18.9
>2 - ≤3 (Adequate stock)	26.2	15.8	16.7	14.9
3+ (Over stock)	34.4	29.8	28.2	8.1
Total %	100.0	100.0	100.0	100.0
Total FWAs	56	53	79	80

The greatest number of stock-outs were observed in thanas following Method-II for both ISLS. In the first ISLS, all six of the observed stock-outs occurred in thanas following Method-II. The most potential stock-outs occurred in thanas following Method-III (10). Overstock situations were most frequently observed in thanas following Method-II. In the second ISLS, seven of the 10 stock-outs occurred with Method-II, the most potential stock-outs were with Method-III, and the most overstock was also with Method-II (Table-4.2).

Table 4.2: Stock levels of condom with the FWAs on the date of visit by experimental method based on physical count

[Figures in number and percentage]

Month of stock (MOS)	1st ISLS Method			2nd ISLS Method		
	I	II	III	I	II	III
0-stock (Stock-out)	0 (0.0)	6 (10.9)	0 (0.0)	0 (0.0)	7 (13.5)	3 (6.3)
>0 - <1 (Potential stock-out)	6 (15.8)	8 (14.5)	10 (20.8)	13 (33.3)	15 (28.8)	20 (41.7)
> 1 - <2 (Under stock)	6 (15.8)	13 (23.6)	18 (37.5)	10 (25.6)	12 (23.0)	9 (18.8)
>2 - <3 (Adequate stock)	12 (31.6)	9 (16.4)	10 (20.8)	8 (20.5)	6 (11.5)	8 (16.7)
3+ (Over stock)	14 (36.8)	19 (34.5)	10 (20.8)	8 (20.5)	12 (23.1)	8 (16.7)
Total	38 (100)	55 (100)	48 (100)	39 (100)	52 (100)	48 (100)

Note: Figures in parentheses indicate percentage.

When the six Rowmari FWAs are excluded from the analysis of the first ISLS, Method-II still had two stock-out situations and potential stock-outs were reduced to six. When four Rowmari FWAs were excluded from the second ISLS, Method-II had six stock-out situations, low stock became 11, and overstock 8.

4.2.4. Stock status of pill (physical count) by thana, DRS area, accessibility and experimental method: In the first ISLS, four FWAs were found with pill stock-outs; two were in Moheshkhali, one in Rauzan and one in Gangachara. However, 17.3 percent of FWAs had potential stock outs. Most potential stock-outs were in Sitakunda

(5), Moheshkhali (4), Rauzan (4), and Rowmari (4). The overstock situation was similar for both the first and second ISLS, where only 12 FWAs (about 9%) were found with overstock of pills. Rauzan had the most FWAs with overstock (3) in both ISLS and one or two FWAs with overstock could be found in six of the other thanas. In the second ISLS, there were no stock-outs and slightly fewer potential stock-outs (15.3%). Potential stock outs were greatest in Sandwip (6), and Moheshkhali (4).

Stock status between DRS areas differed slightly and in both the areas the stock situation worsened in the second ISLS. In the first ISLS, most FWAs in Rangpur DRS had adequate stock (43.5%) or low stock (35.5%). In the second ISLS, the number of FWAs in Rangpur DRS with adequate stock had decreased to 28.8 percent, and low stock had increased to 54.2 percent. In Chittagong in the first ISLS, most FWAs had low stock (36.7%) or adequate stock (29.1%). In the second ISLS in Chittagong, FWAs with low stock had increased to 44.9 percent and adequate stock had decreased to 25.6 percent (Table-4.3).

Table 4.3: Stock levels of pills with the FWAs on the date of visit by DRS based on physical count

[Figures in percentage]

Month of stock (MOS)	Rangpur DRS		Chittagong DRS	
	1st ISLS	2nd ISLS	1st ISLS	2nd ISLS
0-stock (Stock-out)	1.6	0.0	3.8	0.0
>0 - ≤1 (Potential stock-out)	16.1	6.8	17.7	21.8
> 1 - ≤2 (Under stock)	35.5	54.2	36.7	44.9
>2 - ≤3 (Adequate stock)	43.5	28.8	29.1	25.6
3+ (Over stock)	3.3	10.2	12.7	7.7
Total %	100.0	100.0	100.0	100.0
Total FWAs	56	53	79	80

Pill stock-outs, potential stock-outs and low stock situations were similar between thanas of low and high accessibility. However, a greater proportion of FWAs in thanas of high accessibility were observed to have adequate stock and over stock than those in the low accessibility thanas. Thanas of low accessibility had greater proportions of FWAs with stock-outs and potential stock-outs.

As with pill, the greatest numbers of stock-outs were observed in thanas following Method-II. In fact, three of the four observed stock-outs in the first ISLS occurred in thanas following Method-II. In the first ISLS, the most potential stock-outs also occurred in thanas following Method-II (13). Thanas following Method-III had 11 potential stock-outs and Method-I had zero. In

the second ISLS, thanas following Method-III had the most potential stock-outs (10), but Method-II was a close second with nine potential stock-outs. Only two were observed in Method-I. Overstock situations were similar for the three methods in the first ISLS, but in the second, the most overstock situations were seen in Method-II (Table-4.4).

Table 4.4: Stock levels of pills with FWAs by experimental method based on physical count

[Figures in number and percentage]

Month of stock (MOS)	1st ISLS Method			2nd ISLS Method		
	I	II	III	I	II	III
0-stock (Stock-out)	1 (2.6)	3 (5.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
>0 - <1 (Potential stock-out)	0 (0.0)	13 (23.6)	11 (22.9)	2 (5.1)	9 (17.3)	10 (20.8)
> 1 - <2 (Under stock)	7 (18.4)	17 (30.9)	27 (56.3)	13 (33.3)	26 (50.0)	28 (58.3)
>2 - <3 (Adequate stock)	25 (65.8)	18 (32.7)	7 (14.6)	19 (48.7)	10 (19.2)	8 (16.7)
3+ (Over stock)	5 (13.2)	4 (7.3)	3 (6.2)	5 (12.9)	7 (13.5)	2 (4.2)
Total	38 (100)	55 (100)	48 (100)	39 (100)	52 (100)	48 (100)

Note: Figures in parentheses indicate percentage.

When the six Rowmari FWAs are excluded from the analysis, the situation was virtually unchanged in the first ISLS; potential stock-outs in Method-II decreased to nine, low stock becoming 16 and overstock 3. In the second ISLS Method-II, potential stock-outs were reduced to 8, low stock became 23, adequate stock 9, and overstock 6.

4.2.5. Opinions of FWAs about under and over stock: When surveyed the FWAs were asked how many months of stock they should usually have. Over 75 percent in the first and second ISLS said three MOS, about 20 percent said two, and 1 to 2 percent said one MOS.

FWAs who had stock for less than one month's demand were asked why they had such a low stock. Among the 50 FWAs with low pill stock (30 in the first ISLS and 20 in the second) the most frequent response was that the thana store did not supply them according to their requirement (28.0%). Other responses included non-placement of indent (16.0%), a low demand estimate or demand based on last months distribution which had increased (14.0%), did not receive supplies, and distributed more than usual (8.0%). Among the 85 FWAs with low condom stock (29 FWAs in the first ISLS and 56 in the second), the most common response was inadequate supply given from thana store due to condom shortage or stock-out (56.5%), 16.5 percent said the thana store did not supply condoms as per indent/demand, 11.8 percent said that their demand estimate was wrong, no indent was placed because number of clients had reduced (5.9%), and 5.9 percent said their distribution had increased.

FWAs having more than three months of supplies were asked why they had such a high level of stock. In the first ISLS, 22 FWAs had overstock of pills. In the second ISLS, this number had dropped to 14. Of the 38 total FWAs with overstock, the most common reasons were that they were given more supplies than necessary (31.6%), less distribution in that month (26.3%), their indent was not placed correctly[2] (13.2%), and distribution did not take place because the worker was on leave (10.5%).

[2]This response was given in the first ISLS only and is interesting because 3 of the 5 were from Pirganj which was practising Method-II and FWAs were not supposed to be submitting indents. The other two were from Sitakunda, a control thana.

Of the 71 total FWAs with overstock of condoms (47 in first ISLS, 24 in second), 49.3 percent said that it was due to less demand in general or less demand due to the paying system. Other popular answers included supply was larger than demand/necessary (28.2%), products were supplied in full pack (9.9%), less distribution due to voter listing (9.9%), FWA on leave so did not distribute (5.6%), and did not distribute because use date expired (4.2%).

4.2.6. Opinions of FWAs on methods of distribution: The FWAs who participated in Methods-I and II of the experiment were asked to give their opinions about the new system of getting supplies. Of all the FWAs under Methods-I and II, most in both ISLS replied that the new system was better and that they were glad not to be bothered with demand calculations, but positive response towards method was greater. Responses of the two ISLS were averaged and are presented in Table-4.5.

Table 4.5: Opinions of FWAs about Methods-I and II obtained in the ISLS (first and second ISLS combined)

[Multiple response]

Opinions of FWAs	Method I		Method II		Total	
	N	%	N	%	N	%
New system is better	52	67.5	58	54.2	110	59.8
Glad not to be bothered with demand calculation	54	70.1	40	37.4	94	51.1
Supplies are now available as required	22	28.6	25	23.4	47	25.5
Easier to receive supplies	14	18.2	11	10.3	25	13.6
No opinion about new system because have not started new system	2	2.6	17	15.9	19	10.3
Supplies are available in timely manner	4	5.2	7	8.4	11	6.0
Supplies given on fixed date	0	0.0	7	6.5	7	3.8
Possibility of very high or very low stock reduced	2	2.6	5	4.7	7	3.8
Opinions of FWAs	Method I		Method II		Total	
	N	%	N	%	N	%
Don't have to make extra visits to present indents at thana headquarters	3	3.9	7	6.5	10	5.4
New system is not good because not getting supplies according to need	1	1.3	3	2.8	4	2.2
Supplied in a disciplined way	0	0.0	3	2.8	3	1.6
Other	1	1.3	5	4.7	6	3.3
No comment	2	2.6	9	8.4	11	6.0
Total	77	100	107	100	184	100

FWAs following Method-III, the existing system, had received refreshers' training to ensure that they had knowledge of the system. They were asked if they felt that they had benefitted from the training. Of the 95 FWAs in the first and second ISLS, 81

percent replied that they had learnt how to prepare the indent or that indent preparation had become easier. Nearly a quarter said that they had benefitted, but did not add what the benefit was. Some FWAs said that the possibility of overstock or stock-outs had now reduced (15.8%), that they had learnt how to store their supplies (13.7%), that they now received supplies as per their demand (12.6%), or that they had learnt to store up to three months of stock (3.1%).

Three quarters of the FWAs following method-III remarked that the existing distribution system was good. Only three FWAs said that they did not benefit from the training, one said that she did not follow the lessons learnt in training so there was no benefit, and two gave no reasons.

When asked if they had any other comments about the distribution system of contraceptives, many FWAs said that it would be better if supplies were distributed from the FWCs (22.9%). Other new comments included the suggestion that an additional distribution day be added to the mandated distribution day (3.6%), that the meeting and distribution should not take place on the same day (3.2%), and that the transportation cost of supplies be provided (1.1%).

4.2.7. Field investigators' observations of record keeping status of FWAs: Overall, the majority of FWAs were found to have updated registers (77.8%). Most registers were also considered neat, clean and accurate or satisfactory (57.8%). A total of 21.1 perecent of the FWA registers were termed unsatisfactory, 9.3 percent had a lot of overwriting, but only 2.9 percent had many errors.

Field investigators also observed how FWAs stored their contraceptive supplies; 60 percent had properly organized their

supplies and 53.8 percent kept their supplies in a trunk, 14.0 percent kept their supplies in polythene bags, 11.5 percent kept them in an almirah, and 10.4 percent in a carton. A few FWAs also kept them in a wooden box, vanity bag, cloth bag, on the table, in house ceiling or left them scattered about.

4.3. Survey with FWVs

4.3.1. Average distribution of previous two months: An average of two months' distribution figure for the two previous months was calculated using figures of official FWV records. Average distributions figures for condoms and pills were similar. A larger variation was seen with injectables (Table-4.6).

Table 4.6: Mean and range of quantity of contraceptives distributed by FWVs

Contraceptives	Mean		Range	
	1st ISLS	2nd ISLS	1st ISLS	2nd ISLS
Condom (pieces)	58	63	0 - 240	0 - 240
Pill (cycles)	55	54	3 - 225	0 - 226
IUD (pieces)	5	6	0 - 38	0 - 71
Injectables (doses)	56	72	0 - 134	0 - 240

4.3.2. Stock status: Using FWV records, the amount of stock in months of stock (MOS) available immediately after receiving supplies from the thana store was calculated by adding the months opening balance and amount of contraceptives received during the month and then dividing by the average distribution over the previous two months. During the two ISLS, FWVs were found to have overstock of all contraceptives. Average condom, pill and injectable stocks decreased and IUD stock increased in the second ISLS (Table-4.7).

Table 4.7: MOS available with FWVs immediately after receiving supplies

Contraceptives	Mean MOS		Range MOS	
	1st ISLS	2nd ISLS	1st ISLS	2nd ISLS
Condom (pieces)	6.9	5.6	0 - 44.5	0 - 32.7
Pill (cycles)	9.2	6.7	0 - 166.3	0 - 108.9
IUDs (pieces)	12.5	13.3	0.5 - 56.0	1.0 - 104.0
Injectables (doses)	7.9	5.1	0 - 218.0	0.4 - 23.3

Stock status on the date of the field investigators' visit was determined by two means: (1) using the FWVs records, and (2) physically counting her contraceptive supplies. Overall, stock

status mean and range determined by these two methods were similar or the same for condoms, pills and injectables, but differed by about half a months supply of condoms in the first ISLS and nearly a months supply of IUDs in the second (Table-4.8).

Table 4.8: Mean MOS available with FWVs determined from their records and physical count

Contraceptives	Mean MOS			
	1st ISLS		2nd ISLS	
	records	count	records	count
Condom (pieces)	4.4	5.1	4.4	4.4
Pill (cycles)	8.3	8.4	5.7	5.8
IUDs (pieces)	11.4	11.3	12.4	11.5
Injectables (doses)	6.8	6.8	4.3	4.3

In the first ISLS, differences between the FWV register balance on the date of visit and physical counting[1] were observed in 15 (22.4%) FWVs for condoms, 9 (13.4%) FWVs for pill, 6 (8.9%) FWVs for IUD, and 2 (3.0%) FWVs for injectable. For condoms, the difference ranged from one to 154 pieces, with mean 32 pieces. For pills, the difference ranged from one to 30 pieces, with mean 8 cycles. For IUDs, the difference ranged from one to 7 pieces, with mean 3 pieces, and for injectables, the difference ranged from one to 2 doses, with mean one dose. In the second ISLS, differences were less for condom with only 5 (7.8%) FWVs found to have a

[1]Only usable stocks were counted

discrepancy between the register and physical count. Differences ranged from one to 10 pieces with mean three. For pills, it became slightly higher with 10 (15.6%) FWVs found with a difference. The

difference ranged from one to 162 cycles, with mean 20. For IUDs, it increased to seven (10.9%); differences ranged from one to 18, with mean six. For injectables it also became seven (10.9%); differences ranged from one to eight, with mean four doses.

The reasons given by FWVs who had more stock in hand than that written in their records included: distribution number recorded in register was not actually distributed; did not keep accurate records; wrongly left with a client; and entry in the register for FWV herself, but she did not take it yet. There were also reasons to explain lesser actual stock than recorded in the register: they had made the distribution, but they forgot to enter it in the register; supplies had been misused by children or damaged by rats; over distributed supplies to somebody; given loan to others but did not enter it; broken or damaged during insertion; and could not say.

4.3.3. Stock status of condom (physical count) by thana, DRS area, accessibility and experimental method: In the first ISLS, there were three condom stock-outs, in Rowmari, in Boalkhali, one in Moheshkhali. A total of 12 potential stock-outs were observed, three in Sandwip, two each in Gangachara, Pirgacha, Sitakunda and Kutubdia, and one in Fulchari. There were 30 FWVs who were found with overstock of condoms, the greatest frequencies being in Rauzan (7), Pirganj (5), Boalkhali (4), Sitakunda (3) and Moheshkhali (3). In the second ISLS there were three condom stock-outs, one in Rauzan and two in Moheshkhali. There were five potential stock-outs, two in Fulchari, two in Sitakunda and one in Rauzan. Overstock was found with 28 FWAs, in all thanas but Rowmari and Rajibpur. Pirganj had the most FWVs in overstock situations (5), Pirgacha had four, and Boalkhali four and the other thanas between one and three.

In the first ISLS, stock status between DRS areas was similar, with the greatest percentages of FWVs in both DRS areas with overstock or potential stock-outs. The situation changed in the second ISLS where potential stock-outs for both DRS areas decreased. Differences between the DRS areas emerged where the percentages of FWVs in Rangpur DRS with overstock increased, but in Chittagong it dropped (Table-4.9).

Table 4.9: Stock levels of condom with FWVs on the date of visit by DRS based on physical count

[Figures in percentage]

Month of stock (MOS)	Rangpur DRS		Chittagong DRS	
	1st ISLS	2nd ISLS	1st ISLS	2nd ISLS
0-stock (Stock-out)	4.8	0.0	6.1	8.8
>0 - ≤1 (Potential stock-out)	23.8	9.1	21.2	8.8
> 1 - ≤2 (Under stock)	9.5	18.2	9.1	29.4
>2 - ≤3 (Adequate stock)	9.5	9.1	6.1	11.8
3+ (Over stock)	52.4	63.6	57.6	41.2
Total %	100.0	100.0	100.0	100.0
Total FWVs	29	27	38	36

In the first ISLS, two of the three condom stock-outs occurred in thanas of low accessibility. In the second ISLS, condom stock-outs again numbered three, but all were in the low accessible thanas.

In both ISLS, FWVs in areas of high accessibility tended to have better stock situations, and those in low accessible areas had lower stocks.

The greatest number of stock-outs were observed in thanas following Method-II for both ISLS. In the first ISLS, two of the observed stock-outs occurred in thanas following Method-II. The most potential stock-outs occurred in thanas following Method-III. Overstock situations were most frequently observed in thanas following Method-II. In the second, all three of the stock-outs occurred with Method 2, Methods-I and three each had two of the five potential stock-outs, and the most overstock was with Method-I (Table-4.10).

When the Rowmari FWV is excluded from the analysis of the first ISLS, the only change is that Method 2 has one stock-out. When the Rowmari FWV is excluded from the second ISLS, low stock is reduced to six.

Table 4.10: Stock levels of condoms with the FWVs on the date of visit by experimental method based one physical count

[Figures in percentage]

Month of stock (MOS)	1st ISLS Method			2nd ISLS Method		
	I	II	III	I	II	III
0-stock (Stock-out)	5.9	10.0	0.0	0.0	14.3	0.0
>0 - <1 (Porential stock-out)	29.4	0.0	41.2	12.5	4.8	10.5
>1 - <2 (Under stock)	5.9	5.0	17.6	6.3	33.3	31.6
>2 - <3 (Adequate stock)	5.9	10.0	5.9	6.3	4.8	21.1
3+ (Over stock)	52.9	75.0	35.3	75.0	42.9	36.8
Total %	100	100	100	100	100	100
Total FWVs	19	28	20	17	27	19

4.3.4. Stock status of pill (physical count) by thana, DRS area, accessibility and experimental method: In the first ISLS, eight FWVs were found with pill stock-outs of whom three were in Sandwip. A total of 14 FWVs had potential stock outs. Sitakunda and Rauzan had the most potential stock-outs with three each, and Boalkhali and Sandwip each had two. The overstock situation accounted for 49.3 percent of all FWVs in the first ISLS and 41.9 percent in the second. Pirganj had the most FWVs with pill overstock (8) in the first ISLS. In the second, Pirganj, Gangachara and Pirgacha tied for the most FWVs with overstock, each having four.

Stock status between DRS areas differed, most of FWVs in Rangpur (69.0%) in the first ISLS had overstock or adequate stock (13.8%). In Chittagong, the greatest percentage of FWVs had overstock, though at a much lower proportion (34.2%) or low stock (28.9%). The situation changed in the second ISLS where overstock situations for both DRS areas decreased. Adequate stock, low stock and potential stock-outs all increased in the second ISLS (Table-4.11).

Table 4.11: Stock levels of pill with FWVs on the date of visit by DRS based on physical count

[Figures in percentage]

Months of stock (MOS)	Rangpur DRS		Chittagong DRS	
	1st ISLS	2nd ISLS	1st ISLS	2nd ISLS
0-stock (Stock-out)	0.0	4.0	0.0	0.0
>0 - <1 (Potential stock-out)	6.9	0.0	15.8	10.8
> 1 - <2 (Under stock)	10.3	20.0	28.9	32.4
>2 - <3 (Adequate stock)	13.8	16.0	21.1	27.0
3+ (Over stock)	69.0	60.0	34.2	29.7
Total %	100	100	100	100
Total FWVs	29	27	38	36

In both ISLS, FWVs in areas of high accessibility tended to have better stock situations than those in low accessible areas. In the first ISLS, five of the eight pill stock-outs occurred in thanas of

low accessibility. In the second ISLS, there was only one pill stock-out, and it was in a poorly accessible thana.

No stock-outs of pills were found in the first ISLS. The greatest number of potential stock-outs were observed in thanas following Method-III where five of the eight stock-outs occurred. The 14 low stock situations occurred mostly with Methods-II and III. In the second ISLS, the single observed stock-out occurred under Method-II and thanas following Method-III had the most potential stock-outs. Overstock situations varied for the three methods in the first ISLS, most under Method-II. In the second, the most overstock situations were seen in Method-I (Table-4.12).

Table 4.12: Stock levels of pills with the FWVs on the date of visit by experimental method based on physical count

[Figures in percentage]

Pill stock status (MOS)	1st ISLS Method			2nd ISLS Method		
	1	2	3	1	2	3
0-stock (Stock-out)	0.0	0.0	0.0	0.0	4.0	0.0
>0 - ≤1 (Potential stock-out)	10.5	3.4	26.3	0.0	4.0	15.0
> 1 - ≤2 (Under stock)	10.5	20.7	31.6	11.8	24.0	45.0
>2 - ≤3 (Adequate stock)	26.3	13.8	15.8	23.5	32.0	10.0
3+ (Over stock)	52.7	62.1	26.3	64.7	36.0	30.0
Total %	100.0	100.0	100.0	100.0	100.0	100.0
Total FWVs	19	29	19	17	27	19

When the three Rowmari FWVs are excluded from the analysis, the situation is virtually unchanged in the first ISLS; low stock in method-II is reduced to five and overstock is 16. In the second ISLS minus Rowmari, there are no stock-outs, adequate stock becomes seven and overstock eight.

4.3.5. Stock status of IUD (physical count) by thana, DRS area, accessibility and experimental method: In the first ISLS, 9 FWVs were found with IUD stock-outs; one each in Fulchari, Gangachara, Rawmari, Pirganj, Rauzan, Pirgacha and Sandwip, and two in Moheshkhali. A total of 5 (7.4%) FWVs had potential stock outs. Moheshkhali and Sandwip had the most potential stock-outs with 2 each, and Pirganj had one. Overstock of IUDs was found with all the thanas and a total of 46 FWVs (68.7%). In the second ISLS, only 2 IUD stock-outs were observed. Potential stock-outs declined to 4.8 percent of all FWVs. Over stock situation was observed with all the thanas a total of 41 (65.1%) FWVs.

In the first ISLS, stock status for the two DRS areas differed slightly. Most of FWVs in Rangpur (17.2%) had stock-outs, as had most in Chittagong (10.6%). Under stock accounted for 17.2 percent of the FWVs in Rangpur and only 2.6 percent in Chittagong. The situation changed a little in the second ISLS, where stock-outs in Chittagong decreased to 5.6 percent and in Rangpur it was nil (Table-4.13).

IUD stock situations for thanas of greater and lower accessibility were similar in both ISLS.

Table 4.13: Stock levels of IUDs with FWVs on the date of visit by DRS based on physical count

[Figures in percentage]

Months of stock (MOS)	Rangpur DRS		Chittagong DRS	
	1st ISLS	2nd ISLS	1st ISLS	2nd ISLS
0-stock (Stock-out)	17.2	0.0	10.6	5.6
>0 - ≤1 (Potential stock-out)	0.0	3.7	5.3	5.6
>1 - ≤2 (Under stock)	17.2	11.1	2.6	16.7
>2 - ≤3 (Adequate stock)	10.3	14.8	2.6	11.1
3+ (Over stock)	55.3	70.4	78.9	61.1
Total %	100.0	100.0	100.0	100.0
Total FWVs	29	27	38	36

Table-4.14 shows stock situations of FWVs according to experimental methods. It is observed from the table that the stock-out situation of all the cells has been improved substantially. In first ISLS it was 10.5 percent for method-I, 15.4 percent for method-II and 10.5 percent for method-III, and in the second ISLS it is observed that for all the methods stock-outs had decreased substantially (only 5.9% in method-I and nil for methods-II and III).

Table 4.14: Stock levels of IUDs with the FWVs on the date of visit by experimental methods based on physical count

[Figures in percentage]

Months of stock (MOS)	1st ISLS Method			2nd ISLS Method		
	I	II	III	I	II	III
0-stock (Stock-out)	10.5	15.4	10.5	5.9	0.0	0.0
>0 - ≤1 (Potential stock-out)	0.0	0.0	10.6	5.9	4.2	5.3
>1 - ≤2 (Under stock)	5.3	3.8	10.5	11.8	12.5	21.1
>2 - ≤3 (Adequate stock)	0.0	7.6	31.6	11.8	25.0	0.0
3+ (Over stock)	84.2	73.2	68.5	64.1	58.4	73.7
Total %	100.0	100.0	100.0	100.0	100.0	100.0
Total FWVs	19	29	19	17	27	19

When the one Rowmari FWV is excluded from the analysis, the situation is virtually unchanged in both ISLS.

4.3.6. Stock status of injectables (physical count) by thana, DRS area, accessibility and experimental method: In the first and second ISLS, there were no stock-outs of injectables. A total of 11 (16.4%) FWVs were found with potential stock-outs; six were in Sandwip and three in Rauzan. Overstock was found with 34 (50.7%) of all FWVs; Pirganj had the most FWVs with overstock (9). In the second ISLS, potential stock-outs decreased slightly to 9 (14.8%),

the most being in Sandwip (4). Overstock increased to 39 (63.9%) cases, with Pirganj again with the greatest cases (7), followed by Pirgacha (6) and Boalkhali (5).

In the first ISLS, stock status for the two DRS areas differed while that in Rangpur generally had much better stock situations. The majority of FWVs in Rangpur had injectable overstock (75.9%) or adequate stock (17.2%). In Chittagong much fewer FWVs had overstock (31.6%), and a much greater proportion had potential stock-outs (26.3%). The situation changed a little in the second ISLS, where overstock increased for both areas (Table-4.15).

Table 4.15: Stock levels of injectables with the FWVs on the date of visit by DRS based on physical count

[Figures in percentage]

Months of stock (MOS)	Rangpur DRS		Chittagong DRS	
	1st ISLS	2nd ISLS	1st ISLS	2nd ISLS
0-stock (Stock-out)	0.0	0.0	0.0	0.0
>0 - ≤1 (Potential stock-out)	3.4	4.0	26.3	22.1
> 1 - ≤2 (Under stock)	3.4	4.0	21.1	16.7
>2 - ≤3 (Adequate stock)	17.3	4.0	21.1	13.9
3+ (Over stock)	75.9	88.0	31.5	47.2
Total %	100.0	100.0	100.0	100.0
Total FWVs	29	27	38	36

In both ISLS, FWVs in areas of high accessibility tended to have better stock situations than those in low accessible areas. More FWVs in the poorly accessible thanas had potential stock-outs, but more FWVs in the highly accessible thanas had adequate stock and over stock.

FWVs under Method-III in the first ISLS had the largest proportion of potential stock-outs (31.6%). They were followed by Method-II (13.8%). The largest proportion of FWVs with adequate stock were under Method-III, and the for overstock, Method-I had the most. In the second ISLS, the situation changed mainly under Method-III, where overstock increased (Table-4.16).

Table 4.16: Stock levels of injectables with the FWVs on the date of visit by experimental method based on physical count

[Figures in percentage]

Months of stock (MOS)	1st ISLS Method			2nd ISLS Method		
	I	II	III	I	II	III
0-stock (Stock-out)	0.0	0.0	0.0	0.0	0.0	0.0
>0 - ≤1 (Potential stock-out)	5.3	13.8	31.6	0.0	12.0	31.6
> 1 - ≤2 (Under stock)	5.3	17.2	15.8	5.9	16.0	10.5
>2 - ≤3 (Adequate stock)	15.8	17.2	26.3	5.9	16.0	5.3
3+ (Overstock)	73.7	51.7	26.3	88.2	56.0	52.6
Total %	100	100	100	100	100	100
Total FWVs	19	29	19	17	27	19

When the three Rowmari FWVs are excluded from the analysis, the situation is virtually unchanged in both ISLS. In the first, adequate stock-outs is reduced to four (15.4%), overstock to 13 (50.0%). In the second, potential stock-outs become two (9.1%), and overstock 12 (54.5%).

4.3.7. Opinions of FWVs about over and under stock: When FWVs were asked how many months of stock they should usually have, the majority (87%) of FWVs in the two surveys taken together said three MOS, about 11 percent said two. No FWV answered one MOS.

FWVs who had stock of less than one month's demand were asked why they had such low stock levels. A total of 13 FWVs (9.9%) in both surveys were found with low pill stocks, six in the first and seven in the second ISLS. Five of the 13 FWVs said that this was because they could not receive supplies that month. Individual FWVs also explained their situation by saying that there was a stock-out at the thana store, they could not receive supplies because it had become evening, did not place indent, could not receive supplies because the officer was on training, the quantity indented was incorrectly less than the actual need, and they were not supplied according to indent.

Among the 27 FWVs (17 FWVs in the first and 10 in the second) with low condom stock, the most frequent response was inadequate supply given from thana store due to stock-out (37.0%), 22.2 percent said the thana store did not supply condoms as per indent, 18.5 percent said that less quantity was indented, 7.4 percent said no indent had been placed, and 7.4 percent said that they simply did not receive products.

Among the eight FWVs (four in each ISLS) with low IUD stock, three FWVs explained that it was because they had not placed the indent. Individual FWVs also mentioned that it was due to less supplies given against the indented quantity, the storekeeper was negligent,

or the IUDs were becoming unusable due to discoloration and therefore no indent was placed.

Among the 16 FWVs (nine in the first and seven in the second ISLS) with low injectable stock, five explained that it was because more distribution had been made due to increased demand, four said that they did not receive supplies/injectables, three said that the supplies fell short of their demand, two said that they kept less stock because they could easily receive supplies on an emergency basis, and one said that she could not get supplies because the storekeeper was absent.

FWVs having greater than three months of supplies were asked why they had such high stock levels. A total of 60 FWVs were identified with overstock of pills (33 in the first, and 27 in the second ISLS). The most common explanations were that they had previous stock (31.6%), distribution had decreased due to lesser demand (28.3%), carried out most of the distribution (20.0%), a natural calamity or Ramadan had affected distribution (15.0%), and they were supplied more than what they had indented for (15.0%).

Of the total of 61 FWVs with overstock of condoms (34 in first ISLS, 27 in second), 31.1 percent said it was due to less distribution. Other answers included less demand (26.2%), less distribution made from clinic because clients could easily obtain supplies from FWAs (21.3%), given more stock than demand (19.7%), and had previous stock (11.5%).

There were 94 FWVs with overstock of IUDs (46 in first ISLS, 48 in second). A half of the FWVs explained that it was due to less distribution because of lower demand, 19.0 percent said it was because they were supplied more than they had indented for, 12.8 percent said that they had lesser distribution due to a natural calamity or Ramadan, 9.6 percent said that they were given supplies in full packs which exceeded their indent, and 7.4 percent blamed

it on the Eid holiday.

There were 51 FWVs with overstock of injectables (17 in first ISLS, 34 in second). A half of the FWVs explained that it was due to less demand of the Noristerate brand, 43.0 percent said that they were supplied more than what they had indented for, 13.7 percent said that they had lesser distribution due to a natural calamity or Ramadan, and 7.8 percent said they had less distribution that month.

4.3.8. Opinions of FWVs on method of distribution: The FWVs who participated in Methods-I and II of the experiment were asked to give their opinions about the new system of getting supplies. Of all the FWVs under Methods-I and II, most in both ISLS replied that the new system was better and that they were glad not to be bothered with demand calculations, but positive responses towards Method-I were slightly greater. Responses of the two ISLS were averaged and are presented in Table-4.17.

Table 4.17: Opinions of FWVs about Methods-I and II (Averaged percentages from the first and second ISLS)

[Multiple response, figures in percentage]

Opinions	Method-I	Method-II	Total
New system is better	68.6	60.7	63.7
Glad not to be bothered with demand calculation	62.9	50.0	54.9
Receiving supplies according to requirements	5.7	10.7	8.8
Sufficient supplies remain in stock	25.7	12.5	17.6
No need to place indent	0.0	14.3	8.8
Supplies are available in timely manner	11.4	33.9	25.3
Possibility of very high or very low stock reduced	2.9	5.4	4.4
Total FWVs	35	56	91

FWVs following Method-III, the existing system, had received refreshers' training to ensure that they had knowledge of the existing system. They were asked if they felt that they had benefitted from the training. Of the 39 FWVs in the first and second ISLS, 84.6 percent replied that they had learnt how to prepare the indent, 17.9 percent said that they had learnt how to properly distribute and receive supplies, and 10.3 percent said that they had learnt to store the correct amount of stocks. None of the FWVs said that they did not benefit from the training.

When asked if they had any other comments about the distribution system of contraceptives, 19.1 percent said that it would be better

if supplies were distributed from the FWCs, 16.0 percent said that the existing system was good, 15.3 percent had no comment, and 7.6 percent said that the meeting, salary, and supply distribution should not take place on the same day.

4.3.9. Field investigators' observations of record keeping status of FWVs: Overall, the majority of FWVs were found to have updated registers (74.0%). Most registers were also considered satisfactory (52.7%). A total of 20.6 percent of the FWV registers were termed unsatisfactory, 19.1 percent were not updated, and 6.1 percent had a lot of overwriting.

Field investigators also observed how FWVs stored their contraceptive supplies. A total of 42.0 percent of the FWVs had properly organized their supplies. Most (64.9%) kept them in an almirah, but 12.2 percent kept them in a carton, 6.1 percent kept them on the table, and 4.6 percent kept them in a trunk. Only 16.0 perecent of FWVs had not organized their supplies, 7.6 percent of the FWVs had left their supplies scattered about.

SECTION FIVE

POST-INTERVENTION SURVEY

5.1. Introduction

The post intervention survey was undertaken specifically to evaluate the effect of three different stock distribution systems on the contraceptive receipt and supply levels of the fieldworkers.

For reasons beyond the control of the investigators, Rowmari thana did not follow Method-II as planned. Though the Thana Storekeeper had been trained, the TFPO did not attend the training. Follow-up efforts were made to encourage the TFPO and Thana Storekeeper to follow the new system, but no changes were noticed.

The post intervention survey was carried out in selected thanas, six in Chittagong DRS and six in Rangpur DRS and information was collected from all available TFPOs, Storekeepers, FWVs and FWAs from June 20 through 30 1995. A total of 476 FWAs were interviewed out of the 512 interviewed in the pre-survey (93.0%).

5.2. Interviews with FWAs

5.2.1. Duration of service in the present thana: The range of service of the FWAs in the present thana was less than one year to 20 years. The average duration was 11 years with the largest proportions serving between six and ten years (33.1%) and between 16 and 20 years (38.4%). The period of service of the FWAs in the present thana did not differ by DRS area, accessibility or distribution method. However, FWAs in some thanas tended to have worked longer than those in others. For instance, more FWAs in Fulchari had been posted for a longer period of time than those posted in Gangachara.

5.2.2. Estimated need for contraceptives: The FWAs were asked to estimate their monthly needs of contraceptives without looking at their records. These estimates were then compared to the average demand of the previous four months, a number calculated from their official records. Estimates for oral pills (C-5) ranged from the underestimate of 859 cycles to the overestimate of 530 cycles, with mean of 23. Most FWAs (56.6%) estimated their need within 25 cycles of pills, 36.8 percent overestimated by 26 cycles or more, and 6.2 percent underestimated their need by more than 25 cycles.

The condom estimates of the FWAs were also compared to the four months' average demand calculated from their official records. Estimates ranged from the underestimate of 167 pieces to the overestimate of 640 pieces, with a mean of 30. A total of 40.5 percent of FWAs estimated their condom need within 25 pieces, 38.4 percent overestimated their need by over 26 pieces, and 20.7 percent underestimated their need by 26 pieces or more.

5.2.3. Contraceptive receipt: When the FWAs were asked how requests were placed for contraceptive supplies, the majority stated that they filled out an indent (66.0%). Though multiple answers were allowed, none of the other modes were as frequent (Table-5.1).

Table 5.1: Mode of request made by FWAs for contraceptive supplies

[Multiple response]

Mode of request	Percentage N = 476
Fill out indent	66.0
Current supply system	39.2
Issue voucher	35.0
From storekeeper	32.9
Receive at monthly meeting	18.2
Write demand in monthly report	6.3
Fill out MIS Form 4	4.2
Inform FPI/TFPO verbally or in writing	3.1
Others	11.1

Note: N = Number of FWAs

Reported problems in receiving contraceptives:

Problems in receiving contraceptive supplies were reported by 26.9 percent of all FWAs. Problems did not seem to be associated with DRS area. However, FWAs in certain thanas such as Pirgacha, Sitakunda reported problems with much greater frequency than FWAs in other thanas ($p<.000$). Interestingly, problems were also reported more frequently by FWAs in the more accessible thanas than the less accessible ones ($p=.005$). Further, larger proportions of FWAs under Methods-II and III reported problems than FWVs under Method-I (Table-5.2).

Table 5.2: Problems reported by FWAs in getting contraceptive supplies by distribution methods

Whether any problem in getting supplies?	Method-I	Method-II	Method-III
Yes	13.2	25.7	39.0
No	86.8	73.8	61.0
Total %	100.0	100.0	100.0
Total FWAs	129	183	164

A total of 128 FWAs said that they had problems in receiving supplies. The largest percentage complained of transportation problems and that the thana headquarters was too far away (64.1%). Multiple responses were recorded (Table-5.3).

Table 5.3: Problems reported by FWAs in receiving contraceptive supplies

[Multiple Response]

Problem	Percent N = 128
Transportation problem/thana headquarters is too far away	64.1
Difficult to get salary and supplies on monthly meeting day	38.3
Must buy condoms though are distributed free	35.2
Non-availability of supplies due to stock-out at thana store	26.6
Travel cost is expensive	22.7
Other	9.4

Note: N = Number of FWAs who reported problems.

When asked about specific problems under the present supply system,

51.5 percent of all FWAs said that they had a problem with storage space. Most of those with problems (85.3%) said it was because they had no trunk, and many added that supplies were lost, damaged or destroyed because they had no good storage facility.

Only 14.1 percent of all FWAs mentioned any problems with acquiring supplies according to their needs. The majority of these FWAs explained that the problem was due to shortages of stock at the thana store. Among all FWAs, this problem was reported by a greater proportion of FWAs in Chittagong DRS area than in Rangpur (22.9% in Chittagong versus 5.1% in Rangpur, $p<.000$), but no difference between high and low accessibility areas was noticed in this regard. Further, significantly more FWAs under distribution Method-III reported this problem (22.0%) than those under Methods-I (7.0%) and II (12.2%) ($p<.000$).

About 16 percent of FWAs said that they experienced problems due to an excess of supplies issued to them. This problem was equally common in both DRS areas, among thanas of high and low accessibility, and among all three distribution methods. FWAs in Fulchari, Pirganj, Rajibpur, Sitakunda and Moheshkhali reported this problem with greater frequency than others ($p<.000$). The more common problems cited were those of storage (77.6%), transportation (50.0%), keeping of records (25.0%), and expired supplies (23.7%).

About 15 percent of FWAs mentioned that some of the supplies they received were near the expiry date. This problem was not related to DRS area, thana accessibility or particular distribution method, but FWAs in Pirganj, Sitakunda and Moheshkhali had reported this problem much more frequently than in other thanas ($p<.000$). Among those with this problem, most (70.4%) said that products near the expiry date or damaged caused their clients to lose confidence in them, 57.7 percent said that clients did not accept expired supplies, 28.2 percent said that the supplies would get damaged if they could not be used within a specific date, and 18.3 percent said that problems occurred when they tried to return

expired/unusable supplies to the thana store.

As expected, the majority of FWAs under Method-III (92.1%) prepared indents. However, 17.1 percent of FWAs under Method-I and 34.3 percent under Method-II still prepared indents. Only 8.2 percent of FWAs stated that they had any problems preparing indents. Among these 39 FWAs, three quarters said that they needed help in filling out these forms and usually got it from their supervisor, the FPI. Nearly a half said that they were not properly trained to fill out indents and could not fill them out properly, 25.6 percent said that they had problems with the calculations, and 17.9 percent said that they had a problem in estimating their future demand.

Reported advantages of methods of distribution:

When asked about the advantages of the present distribution system, 43.4 percent said that they received their contraceptive supplies according to their demand, 22.0 percent said that they now had sufficient stock, 20.8 percent said that they got their supplies on a fixed day, 20.5 percent said that they always had the necessary stock, and 15.9 percent said that it was good not to submit the indents. FWAs under Methods-I and II generally responded more positively than FWAs under Method-III when asked about the advantages of the present system (Table-5.4).

Table 5.4: Advantages reported by FWAs of the present distribution system

[Multiple response, figures in percentage]

Advantages	Method-I	Method-II	Method-III
Supplies obtained as per demand	57.7	30.6	48.2
Now have sufficient stock	16.8	16.4	33.5
Receive supplies on a fixed day	21.3	28.4	12.8
Always have the necessary stock	16.5	21.3	24.4
Good not to submit indent	36.7	17.5	0.0
N (Number of FWAs)	129	183	164

Reported disadvantages of the distribution of system:

When asked about the disadvantages of the present distribution system, 10.9 percent of all FWAs said that there were too many activities to complete during the thana meeting day and 5.2 percent said that it was troublesome to bring the supplies from the thana store to their home.

Most FWAs who submitted indents submitted them to the FPI. Nearly all received supplies from the thana storekeeper (91.0%), and received their supplies in a timely and correct manner (83.4%). Among the FWAs who said that they did not receive supplies both timely and correctly, most (80.8%) said it was due to a shortage of supplies at the thana store, 9.0 percent said it was due to the storekeeper having to supply many workers a single day, and 6.4 percent blamed it on the absence or negligence of the storekeeper.

Nearly 30 percent of all FWAs reported that there had been at least

one incident in the past six months where they had not been supplied according to their requirement. With respect to distribution method, more FWAs under Method-III mentioned it (40.9%) than FWAs under Methods-II (27.3%) or I (17.1%). Among those with this problem, 92.1 percent said it was due to the shortage of stock at the thana store.

About three quarters of the FWAs said that they received supplies on the monthly meeting day. Among them, most (66.6%) stated that they faced problems in receiving supplies on this day and that the most common problem faced was that the meetings required them to stay too late or after office hours, causing them to return home at night (56.9%). Many also said that it was difficult to complete all the necessary tasks on the meeting day (43.7%), e.g. attend meeting and receive supplies and salary, 33.4 percent complained that communication was bad, and 17.7 percent said that time shortages did not allow them to check the supplies immediately after receipt.

5.2.4. Stock status from personal recollection: More than a half of the FWAs had experienced a stock-out of condoms or pills during the past six months. Stock-outs were reported by greater proportions of FWAs in Chittagong (73.2%) than Rangpur DRS (33.6%) ($p<.000$), and by greater proportions of FWAs in less accessible areas (65.7%) than in more accessible areas (47.0%) ($p<.000$).

Nearly a half of all FWAs (48.4%) had experienced a condom stock out. Among them, 31.3 percent had one condom stock-out and 29.6 percent had two; all of them said that the stock-out had occurred in the past 30 days. Condom stock-outs were equally common under all distribution methods.

About a quarter of the FWAs said that their pills were exhausted at least once in the past six months. Most pill stock-outs had occurred only once (57.1%) or twice (25.2%); all of them said that the stock-out had occurred in the past 30 days. Pill stock-outs

were significantly greater under Methods II and III (Table-5.5).

Table 5.5: Stock-outs reported by FWAs in past six months according to distribution methods

[Multiple response, figures in number and percentage]

Contraceptive	Method I		Method II		Method III	
	Yes	No	Yes	No	Yes	No
C-5	18 (13.8)	111 (86.2)	55 (30.1)	128 (69.9)	47 (28.7)	117 (71.3)
Condom	61 (46.9)	68 (53.1)	93 (50.8)	90 (49.2)	77 (47.0)	87 (53.0)

Note: Figures in parentheses indicate percentage.

Among all FWAs with stock-outs, the largest percentage (47.0%) explained that thana stores did not have adequate supplies to distribute, 19.8 percent said that they had inadequate supplies, 10.3 percent said that they had previous stock in hand so a demand was not placed, 9.5 percent said they had been sick or were on leave, and 6.3 percent stated that their distribution had increased.

5.2.5. Stock status from FWA records: Field Investigators also collected stock status information directly from FWA records for March through June 1995. The average stock situations for these four months is presented below according to distribution method (Table-5.6). For pills, distribution Method-I always had lower percentages of FWAs with less than adequate stock and greater percentages with adequate or overstock than Methods-II and III ($p<.000$). For condoms, proportions were closer for distribution methods, but again, Method-I had significantly greater numbers of FWAs with adequate stock or above ($p=.014$).

Table 5.6: Four months' average stock status of contraceptive with the FWAs by methods of distribution based on RKB

[Figures in percentage]

	Months of stock (MOS)	Method-I	Method-II	Method-III
C-5	0-stock (Stock-out)	0.0	0.0	0.0
	>0 - <1 (Potential stock-out)	1.7	10.5	4.4
	>1 - <2 (Under stock)	20.2	33.9	68.8
	>2 - <3 (Adequate stock)	52.9	39.8	18.8
	3+ (Over stock)	25.2	15.8	8.1
	Total % (N)	100.0 (119)	100.0 (171)	100.0 (160)
Condom	0-stock (Stock-out)	0.0	0.0	0.0
	>0 - <1 (Potential stock-out)	13.0	19.8	30.8
	>1 - <2 (Under stock)	30.0	27.4	34.2
	>2 - <3 (Adequate stock)	24.0	18.9	12.8
	3+ (Over stock)	33.0	34.0	22.2
	Total percentage (N)	100.0 (100)	100.0 (106)	100.0 (117)

Note: Stock at the beginning of the month.

When asked to comment about their stock status, 44.0 percent of all FWAs stated that they believed their stock to be satisfactory and updated, 13.4 percent said it was not satisfactory and updated, 13.8 percent said they had sufficient stock so they did not collect more that month, 9.9 percent said that there was a stock-out at the thana store, and 5.7 percent said that they had been on leave or training.

Most FWAs stated that they were receiving the quantity of contraceptive supplies under the present supply system (80.9%). Among those that did not agree, nearly all said that there was not enough stock at the thana store, a few said that the forms from the DRS were not supplied in a timely manner or that the storekeeper was absent.

Most FWAs (82.0%) offered some type of solution to improve the present supply system. Among them, the most commonly cited solutions were that supplies should be distributed to the FWC level (78.3%), condom should be supplied free of cost (45.3%), the conveyance cost for receiving contraceptives at the thana store should be reimbursed (30.2%), transport should be supplied to the respective home of FWAs (21.5%), bicycles should be provided to FWAs (20.5%), FWAs should be trained to provide injectables (18.7%), a different day should be earmarked to receive supplies that is separate from the salary and meeting day (14.3%), timely supply as per requirements should be ensured (9.5%), sufficient stock at the thana store should be maintained (8.7%), and two to three months supply of contraceptives at one time should be provided (5.9%).

5.3. Interviews with FWVs

5.3.1. Profile of respondents: The profile of respondents was basically the same as that found in the pre-intervention survey

where most were in the ages of 35 to 39 (41.2%) and 30 to 34 (22.4%). There were no major differences between age groups and DRS areas, distribution method or thanas, but FWVs in the most accessible thanas tended to be older than FWVs in the least accessible thanas.

Most FWVs had served between 11 and 15 years (40.0%). Duration of FWVs service did not differ by DRS area, distribution method or thana. However, differences were observed between service duration and thana accessibility. FWVs in the most accessible thanas tended to have served longer than those posted in the least accessible ones. Interestingly, there did not seem to be an association between service length in the present thana and accessibility of the thana. Most FWVs had served between one and five years in their present thana (80.0%), 15.3 percent had served six to 10 years, and 4.8 percent over 10 years.

The majority of FWVs had achieved the Secondary School Certificate (SSC) (51.8%) (Table-5.7). No differences of educational level between DRS areas, thanas, thana accessibility or distribution method were found.

Table 5.7: Educational Achievement of FWVs

Educational Achievement	No. of FWVs	(%)
SSC	44	51.8
HSC	32	37.6
Graduate and above	9	10.6
Total	85	100.0

5.3.2. Estimated need for contraceptives: FWVs were asked to estimate their monthly needs of contraceptives without looking at their records. These estimates were then compared to the average demand of the previous four months, a number calculated from their official records. Estimates for oral pills (C-5) ranged from the underestimate of 123 cycles to the overestimate of 99 cycles, with mean of 15. Most FWVs (72.9%) estimated their need within 25 cycles of pills, 23.5 percent overestimated by 26 cycles or more, and 3.6 percent underestimated their need by more than 25 cycles.

FWVs' estimates for condom were also compared to the four month average demand calculated from their official records. Estimates ranged from the underestimate of 75 pieces to the overestimate of 500 pieces, with a mean of 40. A total of 49.4 percent of FWVs estimated their condom need to within 25 pieces, 45.9 percent overestimated their need by over 26 pieces, and 4.8 percent underestimated their need by 26 pieces or more.

Estimates for IUDs (Copper-T) ranged from the underestimate of 46 to the overestimate of 22, with a mean of four. Most estimated their need within five IUDs (67.1%), 17.6 percent overestimated between five and ten, 11.8 percent overestimated above ten, and 3.6 percent underestimated by more than 5.

Estimates for injectables ranged from the underestimate of 164 injections to the overestimate of 196, with mean of 24. Most estimated their demand within 25 injections (62.3%), 17.6 percent overestimated between 26 and 50 injections, and 16.6 percent overestimated above 50. Underestimates of more than 25 injections accounted for 3.6 percent.

5.3.3. Contraceptive receipt: When FWVs were asked how requests were placed for contraceptive supplies, the majority stated that they filled out MIS Form 3 (68.2%). Though multiple answers were allowed, none of the other modes were mentioned so frequently

(Table-5.8).

Table 5.8: Mode of request made by FWVs for contraceptive supplies

[Multiple response]

Mode of request	% (N=87)
MIS Form 3	68.2
Issue voucher	35.3
Indent	27.1
After completion of monthly meeting	20.0
verbal request from Thana Store Keeper	9.4
Monthly stock from previous stock and supply	3.5
MIS Form 4	3.5
Others	15.3

Reported problems in receiving contraceptive supplies:

About a quarter of FWVs stated that they had any problems in receiving contraceptive supplies. Problems did not seem to be associated with DRS, thana, or thana accessibility. However, much larger proportions of FWVs under Methods-II and III reported problems than FWVs under Method-I (Table-5.9). Among those who had problems, the largest percentage complained of communication problems (47.6%). Multiple responses were recorded (Table-5.10).

Table 5.9: Problems reported by FWVs in getting contraceptive supplies by distribution method

[Figures in percentage]

Whether any problem in getting supplies?	Method-I	Method-II	Method-III
Yes	8.3	24.2	39.3
No	91.7	75.8	60.7
Total	100.0	100.0	100.0
N (Number of FWVs)	24	35	28

Table 5.10: Problems reported by FWVs in receiving contraceptive

supplies

[Multiple Response]

Problems	No. of FWVs	Percent
Communication problem	10	47.6
Expenses of carrying contraceptives from thana store not reimbursed	9	42.9
It is a problem to collect supplies every month	7	33.3
Stock-out at thana store	5	23.8
Time consuming to bring supplies from thana store	4	19.0
Others	5	23.8
Total FWVs	21	

When asked about specific problems under the present supply system, 32.9 percent of all FWVs said that they had a problem with storage space. As in the pre-survey, most (63.2%) of those with problems mentioned that they had no almirah, 40.0 percent said that one almirah was not enough to store their contraceptive supplies, 33.3 percent said they had no shelf or rack so their record keeping books, medicine and contraceptive supplies were kept in the same place, 31.6 percent said they had no store, 28.1 percent complained of no official storage site because they had no proper office e.g. an FWC or government clinic, 21.1 percent said their office was in ill repair, 21.1 percent said that rats or insects had destroyed their supplies, and 15.8 percent said that storage of Depoprovera was a problem because of its temperature requirements.

Only 9 (10.6%) of all FWVs mentioned any problems with acquiring supplies according to their needs. These FWVs were in both DRS areas and in thanas of both high and low accessibility, but only

one was under distribution Method-I, three were under Method-III and the rest under Method-III. All but one of these FWVs explained that the problem was due to shortages of stock at the thana store. A total of 27 FWVs (31.8%) said that they experienced problems due to an excess of supplies issued to them. These FWVs were in both DRS areas and all but one thana. A slightly larger proportion of FWVs under distribution Method-I complained of excess stock (41.7%), compared to Methods-II (24.2%) and III (32.1%). Those with problems cited problems of storage (66.7%) and expired supplies (48.1%). Some also mentioned that it was not possible to distribute the supplies within a specified time period (22.2%) and/or problems in maintaining accounts (22.2%).

Nearly a quarter of FWVs (23.5%) mentioned that some of the supplies they received were near the expiry date. This problem was not related to DRS area, thana accessibility or particular distribution method. Among those with this problem, 70.0 percent said that clients would not accept expired supplies, 50.0 percent said that expired products disturbed their work, 45.0 percent said problems occurred when they tried to return expired/unusable supplies to the thana store and 25.0 percent said problems were created if they received expired IUDs (Cu-T).

As expected, the majority of FWVs under Method-III (85.7%) prepared indents. However, five FWVs under Method-I (20.8%) and 15 (45.5%) under Method-II still prepared indents. Only three FWVs stated that they had any problems preparing indents. One referred to the short supply of official forms which forced her to prepare indents on plain paper, another said there had not been enough training in MIS form use, and one said that the MIS forms were not supplied in a timely manner.

Reported advantages of the present distribution system:

When asked about the advantages of the present distribution system, more than a half of the FWVs said that they received their

contraceptive supplies according to their requirements and 37.6 percent said that it was good not to submit the indents. FWVs under Method-I responded more positively when asked about the advantages of the present system (Table-5.11).

Table 5.11: Advantages reported by FWVs of the present distribution system

[Multiple response, figures in percentage]

Advantage	Method-I	Method-II	Method-II
Supplies obtained as per demand	62.5	39.4	50.0
Good not to submit indent	66.7	48.5	0.0
Whatever is indented for is received	4.2	15.2	35.7
Total number of FWVs	24	35	28

Reported disadvantages of the present distribution system:

When asked about the disadvantages of the present distribution system, about a third of the FWVs said that the supplies were not received in time, and some mentioned that it was inconvenient to carry home the supplies.

The majority of FWVs said that they submitted indents either to the thana storekeeper (56.5%) or the TFPO (15.3%), received supplies from the thana storekeeper (97.6%), and received their supplies in a timely and correct manner (85.9%). Among the 12 FWVs who said that they did not receive supplies both timely and correctly, a half said it was due to a shortage of supplies at the thana store, five said that the storekeeper's absence prevented timely and correct distribution of supplies, four said that the storekeeper sometimes intentionally caused problems for them to receive supplies, and three said that it was due to inadequate of time on the monthly meeting day.

A total of 18 (21.2%) of the FWVs reported that there had been at least one incident in the past six months where they had not been supplied according to their indent. Among them, eight each were under Methods-II and III, and all but one explained that this occurred due to stock shortage at the thana store. Individual FWVs also mentioned that they had miscalculated their demand, and that every month fewer supplies were given without explanation.

A total of 69.4 percent of the FWVs said that they received supplies on the monthly meeting day. Among them, most (64.4%) stated that they faced problems receiving supplies on that day and that the most common problem faced by these FWVs was that the meetings required them to stay too late or after office hours, causing them to return home at night (52.5%). Many also said that it was difficult to complete all the necessary tasks on the meeting day (44.1%), e.g. attend meeting and receive supplies and salary. The FWVs also complained that they had to wait until after office time to receive supplies (30.5%), and 15.2 percent said that the cost of carrying the supplies was not reimbursed.

5.3.4. Stock status from personal recollection: A half of the FWVs had experienced a stock-out for any contraceptive during the past six months. Stock-outs were reported by greater proportions of FWVs in Chittagong than Rangpur DRS, and in less accessible areas. Most FWVs who had a stock-out said that the exhausted items were condoms (58.1%), pill stock-outs were mentioned by 37.2 percent, injectables by 34.9 percent, and IUDs by 18.6 percent. Pill stock-outs were more common under Method-III, but condom, IUD, and injectable stock-outs did not seem to be related to distribution method (Table-5.12).

Most stock-outs were reported to have occurred only once, but many condom stock-outs occurred two or three times.

Table 5.12: Stock-outs reported by FWVs in past six months according to distribution method and by contraceptives

[Multiple response, figures in number and percentage]

Contraceptive	Method-I	Method-II	Method-III
C-5	1 (9.10)	4 (25.0)	11 (68.8)
Condom	7 (63.6)	11 (68.8)	7 (43.8)
Cu-T	1 (9.1)	4 (25.0)	3 (18.8)
Injectable	3 (27.3)	6 (37.5)	6 (37.5)
Total number of FWVs reporting stock-outs	11	16	16

Note: Figures in parentheses indicate percentage.

Among the FWVs with condom stock-outs, most (60.0%) reported the occurrence in the past month. Among those with pill stock-outs, about 44 percent of the stock-outs occurred in the past month and 44 percent in the month before last. A half of the Cu-T stock-outs happened in the month before last and a quarter in the past month and a quarter over two months ago. About a quarter of the injectable stock-outs occurred in the past month, 20.0 percent in the month before last, a third three months ago and 20.0 percent over three months ago.

Among all FWVs with stock-outs, the largest percentage (37.2%) explained that thana stores did not have adequate supplies to distribute, 20.9 percent said that they did not receive supplies, 14.0 percent stated that they had an increase in their demand compared to their supply, and 11.6 percent said that they had not submitted their demand/indent. A few FWVs also mentioned that the storekeeper did not provide them with adequate supplies, or that a

lower demand had been placed due to storage problems.

5.3.5. Stock status from FWV records: Field Investigators also collected stock status information directly from FWV records for March through June 1995. The average stock situations for these four months is presented below according to distribution method (Table-5.13). Though the differences between distribution methods varied for each contraceptive, distribution Method-I always had lower percentages of FWVs with less than adequate stock and greater percentages with adequate stock or overstock.

Table 5.13: Four months' average stock status of contraceptives with the FWVs by methods of distribution

[Figures in percentage]

Months of stock (MOS)	Method-I	Method-II	Method-III
C-5			
0-stock (Stock-out)	0.0	0.0	0.0
>0 - ≤1 (Potential stock-out)	5.0	0.0	0.0
>1 - ≤2 (Under stock)	0.0	17.9	48.1
>2 - ≤3 (Adequate stock)	25.0	21.4	18.5
3+ (Over stock)	70.0	60.7	33.3
Total %	100.0	100.0	100.0
Total FWVs	20	28	27
Condom			
0-stock (Stock-out)	0.0	0.0	0.0
>0 - ≤1 (Potential stock-out)	18.2	0.0	17.6

Cont. of Table-5.13

Months of stock (MOS)	Method-I	Method-II	Method-III

Months of stock (MOS)	Method-I	Method-II	Method-III
>1 - ≤2 (Under stock)	9.1	33.3	11.8
>2 - ≤3 (Adequate stock)	0.0	33.3	29.4
3+ (Over stock)	72.7	33.3	41.2
Total %	100.0	100.0	100.0
Total FWVs	11	6	17
Cu-T			
0-stock (Stock-out)	0.0	0.0	0.0
>0 - ≤1 (Potential stock-out)	0.0	6.3	0.0
>1 - ≤2 (Under stock)	0.0	6.3	4.5
>2 - ≤3 (Adequate stock)	18.2	12.5	18.2
3+ (Over stock)	81.8	75.0	77.3
Total %	100.0	100.0	100.0
Total FWVs	11	16	22
Injectables			
0-stock (Stock-out)	0.0	0.0	0.0
>0 - ≤1 (Potential stock-out)	0.0	9.7	0.0
>1 - ≤2 (Under stock)	4.5	12.9	40.7
>2 - ≤3 (Adequate stock)	9.1	9.7	29.6
3+	86.4	67.7	29.6

Months of stock (MOS)	Method-I	Method-II	Method-III
(Over stock)			
Total %	100.0	100.0	100.0
Total FWVs	22	31	27

Note: Stock at the beginning of the month.

When asked to comment about their stock status, 15.3 percent of all FWVs stated that there had been a time that they did not submit an indent or pick up supplies because they had enough stock in hand. Other comments were also made such as storekeeper had stock-out so they did not receive supplies (3.5%) and they did not submit indent (3.5%).

Most FWVs stated that supplies were properly received under the present supply system (85.9%). Among the 12 FWVs who did not agree, nine complained that there was not enough stock at the thana store, three complained that the storekeeper was absent, and two said that the TFPO had been absent.

Most FWVs (82.4%) offered some type of solution to improve the present supply system. Of these 70 FWVs, the most common solutions were that supplies should be distributed to the FWC level (85.7%), supplies should be received as per indent/demand (31.4%), transportation cost of supplies should be reimbursed (31.4%), distribution of three month's supplies at a time should be ensured (20.0%), more supplies for satellite clinics should be ensured (18.6%), distribution of supplies should not be done on the same day as the monthly meeting (12.9%), supplies to FWAs and FWVs should be distributed on different dates (11.4%) and smoother implementation of the present system should be ensured.

5.4. Interview with TFPOs and Thana Storekeepers (SKs)

A total of 10 TFPOs and 12 storekeepers were interviewed during the post intervention survey. The TFPO of Rowmari who was also in-charge of Rajibpur was on a training during the data collection period.

5.4.1. Profile of respondents: The profile of the respondents, TFPOs and SKs, basically was same as that found in the pre-intervention survey.

5.4.2. Additional responsibilities of storekeepers: Most (7) of the storekeepers reported that they were carrying out additional responsibilities other than the store keeping such as accounting and office administration (25%).

5.4.3 Contraceptive receipt and distribution: Storekeepers were asked about quantities of commodities distributed and received during the months of March, April and May 1995.

Table-5.14 shows the average receipt and distribution of different contraceptives by thana, DRS and accessibility of thana. The three months' average receipt and distribution of condom were 2169 and 4977 pieces respectively. The receipt was nil in Fulchari and Moheshkhali while the maximum number of pieces were received (8000 pcs) by Kutubdia. In respect of distribution, no condom was distributed in Moheshkhali and the maximum number of pieces (9781 pcs) were istributed in Sitakunda.

For pill the average receipt and distribution in the 12 thanas were 9973 and 9375 cycles respectively. The minimum receipt was 1760 cycles (Rajibpur) and the maximum was 23766 cycles (Pirgacha). The minimum distribution was 3090 cycles (Rajibpur) and maximum was

17127 (Rowmari).

For IUDs the average receipt and distribution were 46 and 38 pieces respectively. There were six thanas which did not receive any IUDs during the three months period (Fulchari, Boalkhali, Moheshkhali, Rajibpur and Sitakunda). Sandwip received the maximum pieces of IUDs (200 pcs). The maximum distribution (142 pcs) was also done in Sandwip. There was a thana (Fulchari) where not a single piece of IUD was distributed.

Table 5.14: Three months' average receipt and distribution of contraceptives during March-May'95

[Figures in number]

Cell #	Name of thana	Condom		Pill		IUDs		Injectable	
		Receipt	Distri-bution	Receipt	Distri-bution	Receipt	Distri-bution	Receipt	Distri-bution
I	Fulchari	0	3160	4400	5878	0	0	667	527
	Gangachara	2000	7880	11440	11770	67	30	1568	1487
	Boalkhali	4000	2433	8800	7363	0	28	633	712
	Kutubdia	8000	5836	5280	3120	0	15	600	427
Cell Average:		**3500**	**4827**	**7480**	**7033**	**17**	**18**	**867**	**788**
II	Pirgonj	4000	8040	15840	17030	100	48	1500	1240
	Rowmari	4000	2480	11440	17187	67	67	1367	600
	Rauzan	4000	3927	8800	7800	50	33	1433	1025
	Moheshkhali	0	0	7040	6270	0	25	567	378
Cell Average:		**3000**	**3612**	**10780**	**12072**	**54**	**43**	**1217**	**811**
III	Pirgacha	4000	4787	23760	17107	67	15	1500	904
	Rajibpur	4000	6600	1760	3090	0	40	367	443
	Sitakunda	6000	9781	9680	7100	0	13	900	866
	Sandwip	4000	4800	11440	8786	200	142	867	842
	Cell Average:	**4500**	**6492**	**11660**	**9021**	**67**	**53**	**909**	**764**
All Thana Average:		**2169**	**4977**	**9973**	**9375**	**46**	**38**	**998**	**788**
DRS	Rangpur	3000	5491	11440	12010	50	33	1162	867
	Chittagong	4333	4463	8506	6740	42	43	833	708
Accessi-bility	Good	4000	6141	13053	11362	47	28	1256	1039
	Bad	3333	3813	6893	7388	45	48	739	536

For injectables the three months' average receipt and distribution were 998 and 788 doses/ampoules respectively. The minimum receipt was 367 doses/ampoules (Rajibpur) and the maximum was 1568 doses/ampoules (Gangachara). The minimum distribution was 427 doses/ampoules (Kutubdia) and maximum was 1487 vials (Gangachara).

The average receipt of condom was higher in Chittagong DRS thanas than those of Rangpur but the distributions were reverse. The average receipt and distribution of pills and injectables were much higher in Rangpur DRS than in Chittagong. The average receipt and distribution of contraceptive in most accessible thanas were higher than in the less accessible thanas except for IUDs.

5.4.4. Procedure of receipt from DRS: It was revealed that commodities were received both through `push' and `pull' system. (Table-5.15).

Table 5.15: Procedure of receiving supplies from DRS by the Thanas

[Multiple response and figures in number]

Responses	TFPOs (N=10)	SKs (N=12)
Through push system	3	5
Through pull system	7	4
Though both pull and push system	2	3

The TFPOs and SKs were asked whether they faced any problems in receiving supplies in the existing system. Most TFPOs and SKs reported that there were problems. The frequently mentioned problems related to transportation problem, non-availability of products on time and inadequate supplies. The other problems reported were, high transportation cost, bad communication and lack of sincerity of DRS personnel in supplying commodities etc.

Beyond the problems related to receipt of supply of commodities, some general problems as such as below were mentioned by the TFPOs and SKs:

- Insufficient space in the store
- Supply of commodities having expired dates by the DRS
- Administrative difficulties in returning date expired commodities to DRS
- Shortage of supply of condom from the DRS
- Lack of security of the store
- Shortage of racks in the stores.

Among many of the above mentioned problems, the most frequently reported problem was `insufficient space in the store' (11 SKs, 8 TFPOs).

Many different suggestions were put forward by both TFPOs and SKs to correct the problems in supplying contraceptives to FWCs/FWAs. They included continuous maintenance of adequate stock, supply of stock from DRS based on demand, provision of a separate storeroom at the thana level and initiative by the higher authority to make the DRS personnel more sincere in distributing commodities to the thana stores.

5.4.5. Stock-out of contraceptives: The TFPOs and SKs were asked whether there was any incidence of stock-out or near stock-out for any item during the six months period prior to the post-survey. Almost all the TFPOs and SKs reported about stock-out or near stock-out. Most of them mentioned about stock-out of condom which occurred due to shortage of condom in DRS.

All TFPOs and SKs stated that special indents were placed to the DRS when stock-outs occurred, and a half of the SKs and TFPOs said that they had received the supplies as per the indent. The rest reported that supplies were not given as per indent. The reason for not supplying as per indent was mentioned as shortage of stock in DRS.

5.4.6. Supply of contraceptives to FWCs: The TFPOs and SKs were asked how the contraceptives were distributed to the FWCs from the thana stores. The responses of the TFPOs and SKs are presented in Table-5.16.

Table 5.16: Reported system of distribution of contraceptives to the FWCs from the thana stores

[Multiple response, figures in number]

Responses	TFPOs (N=10)	SKs (N=12)
As per indent of FWVs (pull)	4	4
As per demand place through MIS form-3 (pull/push)	3	3
Through calculating demand using calculation sheets (push)	5	5
Sometimes on `push' and sometimes on `pull' system	1	1

Both `pull' and `push' system of distribution were mentioned by the TFPOs and SKs in supplying contraceptives to the FWCs. A half of the TFPOs and SKs reported having problems in supplying contraceptives to the FWCs. The common major problem reported by TFPOs and SKs was the shortage of supply of contraceptives from the

DRS. They could not supply as per demand of the FWVs because the supply from the DRSs was not sufficient.

When asked what did they do when stock level dropped below one month's supply at the thana store, a variety of responses were received (Table-5.17). The TFPOs and SKs frequently mentioned that they distributed the commodities on hand proportionate to the demands of the individual FWVs.

Table 5.17: Supply procedure to FWVs when stock level fell below one month as reported by TFPOs and SKs

[Multiple response, figures in number]

Reported response	TFPOs (N=11)	SKs (N=12)
All the stock of the thana store was supplied proportionate to the demand of individual FWV	7	6
Indent was placed to the DRS for those products and request was made to supply on urgent basis	1	2
Only the FWVs who had high demand were supplied and the rest were supplied later	1	1
FWVs who had sufficient stock on hand were asked to give loan to the others	1	1
In case of stock-out no supply could be made	-	1
Not applicable/problem not faced	1	2

It was asked whether the FWVs visited the thana store regularly on the supply date. To this query, only 2 TFPOs and 3 SKs responded negatively. And the commonly mentioned reason for not visiting was sickness of the FWVs and sometimes they mentioned about negligence to duties. One TFPO mentioned that sometimes FWVs could not come to receive supply because they remained busy in organizing satellite clinic.

5.4.7. Procedure of supply to FWAs: Majority of the TFPOs (60%) and SKs (66%) reported that FWAs were supplied contraceptive commodities according to a `push' system (Table-5.18).

Table 5.18: Reported Procedure of Supplying Contraceptives to FWAS

[Multiple response, figures in number]

Responses	TFPOs N=10	SKS N=11
Calculating the demand of each FWA using calculation sheets through `push' system	6	8
Through indent	4	3
Through MIS form-2	1	1

Six TFPOs and seven SKs told that they faced problem in issuing supplies to the FWAs. The most frequently reported problem was shortage in supply of condom from the DRS.

One TFPO and one SK said that sometimes FWAs were not able to fill up the demand/indent form correctly. They also reported that the FPIs did not submit report on time.

Seven TFPOs and eight SKs said that the FWAs were regular in receiving supplies from the thana stores. The remaining SKs said that some of the FWAs did not come, sometimes because of negligence or sickness. One TFPO said that due to involvement in satellite clinic FWAs could not come to receive goods regularly.

Four TFPOs and five SKs said that they faced problems in supplying goods to the FWAs following the existing system of distribution and they mentioned the following problems in this regard:

- Problems of stock of contraceptives (2 TFPOs, 1 SK).
- FWAs were sometimes not able to prepare Demand/Indent Correctly (1 TFPO, 1 SK).

- Absence of storekeeper (1 TFPO).

- Shortage of condom (1 TFPO, 2 SKS) etc.

The reported suggestions for solving the above mentioned problems were as follows:

- To follow `push' system of distribution.

- To ensure sufficient stock of goods in the thana store.

- To provide proper training to the FWAs in preparing reports correctly.

- To appoint storekeeper on an urgent basis etc.

5.4.8. Thana Stores: Out of the 12 thanas, 9 distributed contraceptives on the day of the monthly meeting day and the rest three on other days. Most SKs reported that the time allowed for supplying contraceptives on the day of the monthly meeting was insufficient. They said that there were too many tasks to complete in short time, e.g monthly meeting, salary payment and distribution of commodities. Some added that distribution sometimes continued till the evening and that this was inconvenient for the FWAs/FWVs.

In response to a question "whether the present system of distribution is alright", most of the SKs (11) and TFPOs (8) responded positively.

One TFPO said that the existing system of distribution was not

good because the FWAs could not calculate demand correctly and therefore under and over stock situation occurred.

5.4.9. Reported advantages of the current system of distribution: The TFPOs and SKs were asked to mention the advantages of the present system of distribution and their responses are presented in Table-5.19.

Table 5.19: Reported advantages of the current system

[Multiple response, figures in number]

Advantages	TFPOS N=10	SKs N=12
Due to supplies as per demand, the problems of stock-out/over stock were minimum	3	5
As quantity to be distributed is determined earlier, the distribution could be handled easily	2	3
Over and under stock situation was minimum	2	1
No need to prepare indent	2	-
Three months stock on hand is ensured	2	2
Minimum distribution time is needed	1	1
Chance of error in calculating demand is minimum	-	1
IV could be prepared readily	-	2
As demand could be determined beforehand supply for DRS could be taken earlier	2	1

5.4.10. Disadvantages: The disadvantages of the current system of distribution were also enquired into. In response to this, only one SK said that the FWAs/FWVs could not prepare indent/demand correctly. It was also reported by two TFPOs.

Eight TFPOs and ten SKs provided suggestions to make the system more effective. The suggestions were as follows:

- To ensure supplies regularly from the DRS (5 SKs, 3 TFPOs).
- To provide sufficient training on `push' and `pull' system of distribution (2 SKs, 1 TFPO).
- To ensure submission of reports by FPIs/FWVs on time (1 SK).
- To distribute commodities on a separate day i,e other than the day of meeting and salary (1 SK).
- To provide training to FWAs/FWVs for proper storing of commodities (1 SK, 1 TFPO).
- To supply goods to FWAs/FWVs in polythene bag (1 SK, 1 TFPO).
- To train the SKs on demand calculations (1 TFPO).

SECTION SIX

ANALYSIS OF STOCK DATA

6.1. Introduction

Stock data can provide a useful estimate of the efficiency of the logistic system of the family planning program at all administrative levels. These data include the total quantities of contraceptives received, their distribution, and the balance of stocks on hand at the end of the month. With these data, the stock status of the program can be expressed in terms of the number of months of supply/stock on hand, by method and by brand. The quantity of stock on hand or the stock level at a given facility should be such that it ensures continuous availability of contraceptives. Stock levels are therefore expressed in terms of a certain months of supply/stock to meet the anticipated demand. The buffer, cushion, or reserve stock are be kept on hand to protect against stock-outs caused by delayed deliveries or narrowedly increased demand or temporary breakdowns in the supply system. The months of supply/stock on hand are estimated as

$$\frac{\text{Balance on hand of a particular brand of commodities}}{\text{Average monthly quantity dispensed/distributed to users}}$$

When the program requires, say, three months' supply with all outlets, determining how much more or less than this quantity may be kept on hand may be difficult and at times confusing. An under-stock or over stock condition can be better understood by using a range to express the quantities to be kept on hand.

For example, a program may establish that the level of stock on hand of a field worker (FWA/FWV) at the end of the month will not be less than two month's supply and not more than three months'

stock on receiving the supply. Less than two-months' stock is under stock and more than three months' stock is over stock.

This section presents the study findings on the stock status of different contraceptives at the thana stores and at the level of FWAs and FWVs by the three experimental methods tested in this study.

It may be noted that training to the concerned thana FP officers on the specific methods/systems of distribution was the only intervention in this study. During the six month period following intervention training data on distribution of contraceptives were gathered and no intervention/training was given during this data collection period.

6.2. Stock Status of Different Contraceptives at the Thana Store During the Intervention Period

Table-6.2.1 shows the stock status of contraceptives at the thana stores prior to their distribution to the FWAs and FWVs on the monthly distribution days during the period of observation after the intervention. Among all the sample thanas it was observed that the stock status of contraceptives was highly unsatisfactory in Moheshkhali, where the stock level of condom throughout the period was almost zero and that of pill was below the expected level.

Condom: None of the experimental thanas had satisfactory stock (2-3 months of stock) of condom during the whole 6 months period of the field experiment. Stock-out (zero-stock) and potential stock-out (<1 month of stock) were observed with about a half of the thana stores prior to distribution of contraceptives. During the six month period, it was observed that only in the second month of observation (February 1995) there was no stock-out or potential stock-out in any of the thana stores. Condom stock-out occurred most frequently in the month of June, followed by April and March. Of the 72 observations (12 thanas x 6 months) stock-out of condom was observed in 12 observations (18%) and potential

stock in 22 observations (30%). The average stock status was better in the accessible thanas than in the inaccessible thanas. The overall stock status was better at Rangpur DRS than at Chittagong DRS (Table-6.1).

The reason for the stock-out of condom was the severe nation-wide condom shortage due to procurement problems.

Pill: The stock status of pill over the six month period of experiment was more or less satisfactory. Stock-out and potential stock-out were observed on some occasions in five thanas namely, Pirgonj, Kutubdia, Moheshkhali, Rauzan and Rajibpur. On 3 of the observation days (14%) in different thanas there was no stock of oral pills (Table-6.1).

IUDs: On some distribution days, 50 percent of the thanas faced the situation of stock-out or potential stock-out of IUDs. Such thanas were Gangachara, Pirgonj, Rowmari, Moheshkhali, Sandwip and Pirgacha. In fact, on 5 of the distribution days (7%) in different thanas there was no stock of IUD. On the other hand, the over-stock ($\geq$3 MOS) situation of IUDs was observed in most of the thanas during the experimental period (Table-6.1).

Injectable: The overall stock status of injectable contraceptive was satisfactory. During the whole study period stock-out of injectable contraceptive occurred twice in Moheshkhali and once in Pirgonj.

The major reasons for stock-out or potential stock-out as reported by the storekeepers were as follows:

- Indent was submitted to the DRS but supplies did not reach: reported by 14 thanas
- No stock was available with the DRS: 3 thanas
- Inadequate supply from DRS: 3 thanas
- Sometimes DRS could not supply commodities because of bad communication: 2 thanas

Table 6.1: Stock status of contraceptives at the thana stores prior to distribution, during the observation period, January-June 1995

[Figures in Months of Supply MOS]

Cell #	Name of thana	Condom						Pill						IUD						Injectables					
		Jan.	Feb.	March	April	May	June	Jan.	Feb.	March	April	May	June	Jan.	Feb.	March	April	May	June	Jan.	Feb.	March	April	May	June
I	Fulchari	0.0	6.3	1.7	1.3	0.1	0.0	2.9	3.5	2.5	2.3	3.4	2.3	7.1	7.1	3.7	15.0	15.0	15.0	3.4	2.2	1.8	1.7	5.4	3.1
	Gangachara	1.2	2.7	1.9	0.9	0.2	0.5	4.1	3.5	3.0	3.8	2.9	3.3	0.0	4.0	2.1	3.8	7.5	7.4	0.0	2.3	2.8	4.4	3.0	2.5
	Boalkhali	1.8	1.3	0.3	0.0	0.6	1.4	2.4	1.3	2.4	2.0	2.6	1.2	3.3	4.5	4.8	5.5	5.9	6.7	3.4	3.2	3.6	5.2	2.0	2.2
	Kutubdia	1.1	3.5	0.9	0.3	4.0	1.8	3.7	3.6	1.0	1.1	5.0	1.9	12.0	9.6	8.2	10.9	2.5	2.5	3.6	2.6	1.8	1.7	6.6	2.6
II	Pirgonj	1.6	1.8	2.6	1.6	1.3	0.0	2.9	2.8	3.3	3.2	2.7	0.0	1.9	0.5	2.3	2.4	3.2	0.0	2.4	1.1	1.9	3.5	2.1	0.0
	Rowmari	0.1	2.8	0.0	0.0	2.0	0.4	2.2	2.0	1.7	1.8	2.7	1.0	2.1	9.4	3.5	0.0	3.9	1.1	2.7	2.6	1.6	2.3	4.1	2.3
	Rauzan	0.1	2.5	0.6	2.3	0.8	0.8	3.3	2.7	2.4	0.3	3.6	2.9	2.1	4.0	3.5	4.2	4.7	5.7	2.5	2.2	1.6	5.4	5.2	2.8
	Moheshkhali	0.6	1.9	0.0	0.0	0.0	0.0	1.7	3.1	0.0	1.3	1.1	0.0	28.0	40.0	5.5	4.4	0.0	0.0	1.1	3.6	0.0	1.5	5.8	0.0
III	Pirgacha	1.9	4.1	3.1	2.2	2.3	2.4	3.4	3.2	5.3	8.8	7.0	11.2	2.1	1.6	1.2	0.1	0.1	10.0	2.1	2.6	1.9	2.6	3.4	3.8
	Rajibpur	2.4	1.9	1.8	0.1	2.2	1.0	2.9	2.5	3.9	0.6	0.9	0.6	6.7	10.7	25.0	16.2	11.8	4.7	2.0	1.1	4.4	1.8	4.4	2.3
	Sitakunda	1.9	1.0	0.6	0.0	1.5	0.8	2.8	2.0	4.2	2.4	3.2	3.0	5.1	3.8	12.0	12.0	15.1	15.4	4.3	3.7	7.1	2.7	3.3	2.8
	Sandwip	1.3	1.6	0.4	0.0	1.6	0.2	3.2	2.7	2.8	2.2	3.4	2.3	0.6	3.3	3.3	3.4	3.7	3.7	6.2	3.3	4.8	4.9	4.6	3.6
DRS Stock status (average)	Rangpur	1.2	3.2	1.8	1.0	1.3	0.7	3.0	2.9	3.3	3.4	3.2	3.0	3.3	5.5	6.3	6.2	6.9	6.3	2.0	1.9	2.4	2.7	3.7	2.3
	Chittagong	1.1	2.0	0.5	0.4	1.4	0.8	2.8	2.5	2.1	1.5	3.1	1.9	8.5	10.9	6.2	6.7	5.3	5.6	3.5	3.1	3.1	3.5	4.6	2.3
Accessi-bility (average)	Good	1.4	2.2	1.5	1.1	1.1	1.0	3.1	2.5	3.4	3.4	3.6	3.6	2.4	3.0	4.3	4.6	6.1	7.5	2.4	2.5	3.1	3.9	3.1	2.3
	Bad	0.9	3.0	0.8	0.3	1.6	0.5	2.7	2.9	2.0	1.5	2.7	1.3	9.4	13.3	8.2	8.3	6.1	4.5	3.1	2.5	2.4	2.3	5.2	2.3

Source: Inventory Control Register (ICR) of respective thana stores.

6.3. Monthly Receipt of Commodities by the FWAs/FWVs

Condom: It was observed from the records of FWAs and FWVs that on an average 40.8 percent of FWAs and 24.0 percent of FWVs had received supply of condom from thana stores on the monthly distribution days during the experimental period. The percentage of FWAs receiving condom did not vary with respect to the experimental cells. It varied in case of FWVs: 23 percent in cell-I, 21 percent in cell-II and 28 percent in cell-III (Table-6.2 and Fig. 6.2).

Pills: Over two-thirds of the FWAs received supply of pill from the thana stores on the distribution days. It was highest in case of method-II (74%), followed by method-I (70%). In case of FWVs, on average, only around one-third had received pill from the thana stores on the monthly distribution days.

Table 6.2: Receipt of condom and oral pill by FWAs and FWVs from the thana store on the monthly distribution days by experimental cells/methods

[Figures in number and percentage]

Cell/ Methods	Condom						Pill					
	FWAs			FWVs			FWAs			FWVs		
	Receipt	Not receipt	Total	Receipt	Not receipt	Total	Receipt	Not receipt	Total	Receipt	Not receipt	Total
I	60 (41.0)	85 (59.0)	145 (100.0)	7 (23.0)	24 (77.0)	31 (100.0)	102 (70.0)	43 (30.0)	145 (100.0)	11 (36.0)	20 (64.0)	31 (100.0)
II	80 (40.0)	119 (60.0)	199 (100.0)	9 (21.0)	33 (79.0)	42 (100.0)	148 (74.0)	51 (26.0)	199 (100.0)	15 (36.0)	27 (64.0)	42 (100.0)
III	80 (41.0)	115 (59.0)	195 (100.0)	10 (28.0)	26 (72.0)	36 (100.0)	128 (66.0)	67 (34.0)	195 (100.0)	14 (39.0)	22 (61.0)	36 (100.0)
Total	220 (40.8)	319 (59.2)	539 (100.0)	26 (24.0)	83 (76.0)	109 (100.0)	378 (70.0)	161 (30.0)	539 (100.0)	40 (37.0)	69 (63.0)	109 (100.0)

Note: 1. Six months' (January-June'95) average figure.

2. Figures in parentheses indicate percentage.

PERCENTAGE OF FWAs AND FWVs RECEIVING CONDOM AND PILL DURING STUDY PERIOD

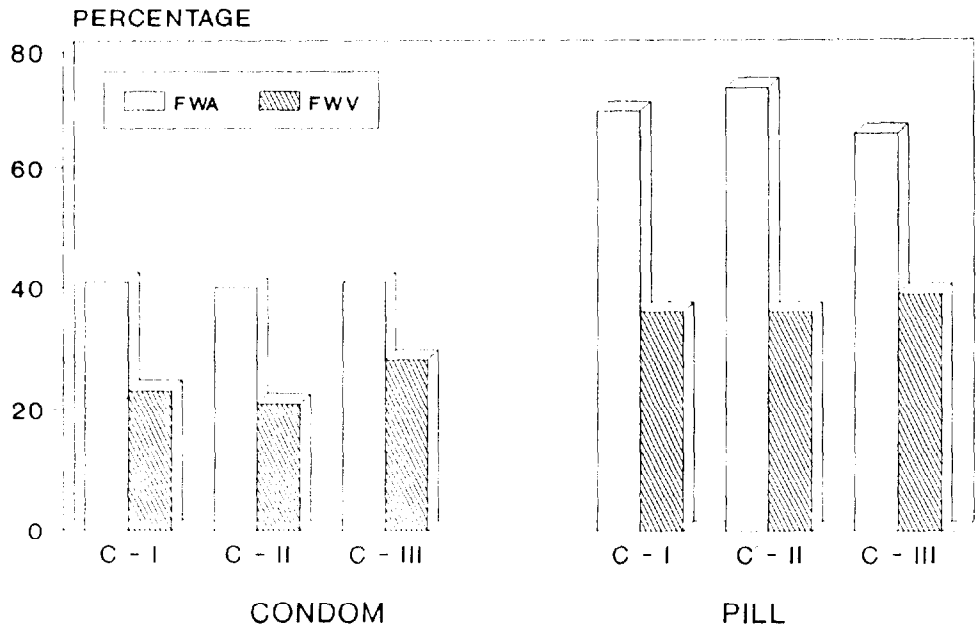


FIG.6.1

NOTE:C:CELL/METHOD;SIX MONTHS' AVERAGE

6.4. Stock status of contraceptive with FWAs and FWVs after receipt and at the end of month

During the study period data on receipt, distribution and balance on hand stock at the end of the month were collected. To see the stock status just after receipt of fresh stock, the stock on hand was converted into months of stock following the procedure stated in sub-section 6.2.

Stock status of pill with FWAs: Based on the information on MIS Form-2, it was estimated that on an average 2.3 percent FWAs in cell-I, 5.5 percent in cell-II and 3.5 percent in cell-III did not

have any pill on hand or had stock for one month or less after receipt of contraceptive commodities from the thana stores. These levels increased to 22.5 percent in cell-III, 18.2 percent in cell-II and 7.6 percent in cell-I at the end of month i.e. prior to receipt of supplies from the thana stores (Table-6.3 and Fig. 6.2).

Table 6.3: Average stock status of Pill with the FWAs after receipt and at the end of month

[Figures in number and percentage]

Month of stock	Cell - I		Cell - II		Cell - III	
	AR	EM	AR	EM	AR	EM
0-stock (Stock-out)	6 (0.8)	17 (2.0)	18 (2.0)	49 (4.8)	14 (1.4)	30 (2.6)
>0 - ≤1 (Potential stock-out)	11 (1.5)	48 (5.6)	31 (3.5)	137 (13.4)	20 (2.1)	233 (19.9)
>1 - ≤2 (Under stock)	40 (5.6)	251 (29.1)	85 (9.7)	446 (43.7)	172 (17.6)	645 (55.3)
>2 - ≤3 (Adequate stock)	212 (29.6)	407 (47.1)	400 (45.4)	262 (25.7)	528 (54.2)	187 (16.0)
3+ (Over stock)	447 (62.4)	141 (16.3)	347 (39.4)	127 (12.4)	241 (24.7)	75 (6.4)
N	**716**	**864**	**881**	**1021**	**975**	**1170**

Source: MIS Form # 2

Note: N : Number of FWAs

AR : Stock on hand after receipt

EM : Stock on hand at the end of the month

( ): Indicate percentage

STOCK STATUS OF PILL WITH FWAs AFTER RECEIPT AND AT THE END OF MONTH

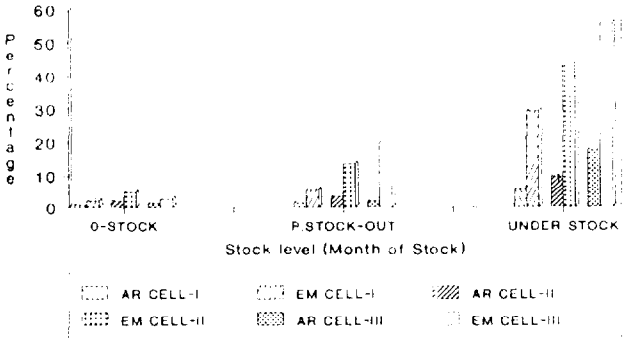


Fig 6.2

NOTE:AR•AFTER RECEIPT,
EM:AT THE END OF MONTH,P:POTENTIAL

Stock status of condom with FWAs: As expected, in case of condom the level of stock-out and potential stock-out after receipt was as high as 11 percent for FWAs in cell-I, 18 percent for cell-II and 14 percent for cell-III, which increased to 28 percent, 33 percent and 36 percent respectively at the end of the month (Table-6.4 Fig. 6.3).

Table 6.4: Average stock status of condom with the FWAs after receipt and at the end of the month

[Figures in number and percentage]

Month of stock (MOS)	Cell - I		Cell - II		Cell - III	
	AR	EM	AR	EM	AR	EM
0-stock (Stock-out)	14 (2.0)	59 (6.9)	80 (9.3)	148 (14.6)	22 (2.3)	82 (7.3)
>0 - ≤1 (Potential stock-out)	61 (8.5)	184 (21.4)	73 (8.5)	183 (18.0)	115 (11.8)	332 (28.5)
>1 - ≤2 (Under stock)	128 (17.9)	206 (24.0)	134 (15.6)	222 (21.9)	256 (26.4)	336 (28.9)
>2 - ≤3 (Adequate stock)	168 (23.5)	186 (21.6)	155 (18.1)	182 (18.0)	237 (24.4)	168 (14.4)
3+ (Over stock)	345 (48.2)	225 (26.2)	416 (48.5)	279 (27.5)	341 (35.1)	243 (20.9)
N	**716**	**860**	**858**	1014	**971**	**1164**

Source: MIS Form # 2

Note: N : Number of FWAs
AR : Stock on hand after receipt
EM : Stock on hand at the end of the month
( ): Indicate percentage

STOCK STATUS OF CONDOM WITH FWAs AFTER RECEIPT AND AT THE END OF MONTH

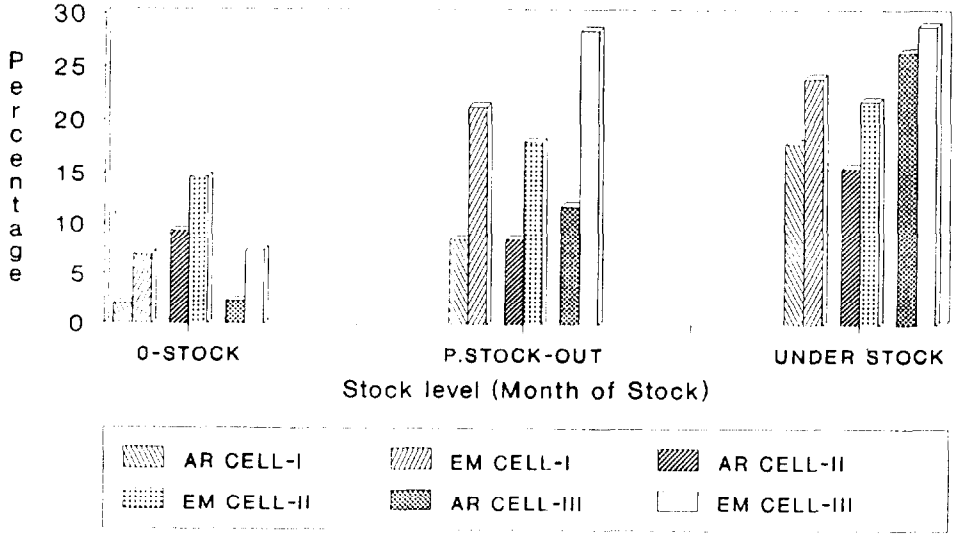


Fig.6.3

NOTE:AR•AFTER RECEIPT,
EM:AT THE END OF MONTH, P:POTENTIAL

Stock status of pill with FWVs: About 5 percent FWVs in cell-I, 4 percent in cell-II and 3 percent in cell-III had stock-out or potential stock-out of pill after receipt. At the end of the month, the figures rose to 9 percent in cell-I, 10 percent in cell-II and 21 percent in cell-III. On the other hand over stock status was found to be very high at the end of the month: 57 percent for method-I, 52 percent for method-II and 43 percent for method-III (Table-6.5 and Fig. 6.4).

Table 6.5: Average stock status of Pills with the FWVs after receipt and at the end of the month

(Figures in number and percentage)

Month of stock (MOS)	Cell - I		Cell - II		Cell - III	
	AR	EM	AR	EM	AR	EM
0-stock (Stock-out)	5 (3.2)	11 (5.9)	5 (2.9)	15 (6.9)	1 (0.6)	4 (1.8)
>0 - ≤1 (Potential stock-out)	2 (1.3)	6 (3.2)	2 (1.2)	7 (3.2)	3 (1.9)	42 (18.9)
>1 - ≤2 (Under stock)	4 (2.6)	34 (18.3)	6 (3.5)	41 (18.9)	29 (18.1)	55 (24.8)
>2 - ≤3 (Adequate stock)	25 (16.1)	29 (15.6)	32 (18.6)	42 (19.4)	42 (26.3)	26 (11.7)
3+ (Over stock)	119 (76.8)	106 (57.0)	127 (73.8)	112 (51.6)	85 (53.1)	95 (42.8)
N	**155**	**186**	172	217	**160**	**222**

Source: MIS Form # 3

Note: N : Number of FWAs
AR : Stock on hand after receipt
EM : Stock on hand at the end of the month
( ): Indicate percentage

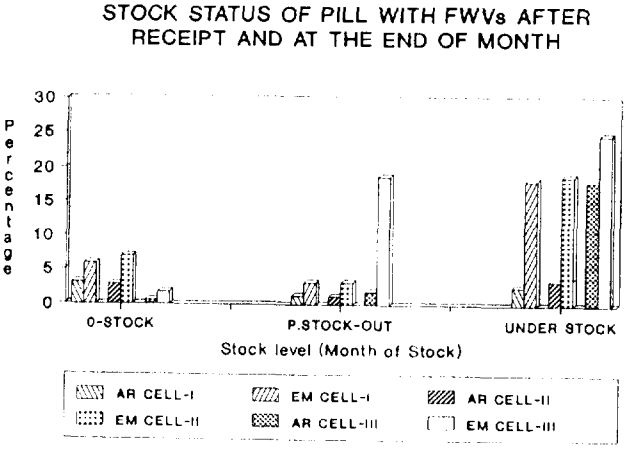


Fig.6.4

NOTE:AR-AFTER RECEIPT,
EM:AT THE END OF MONTH, P:POTENTIAL

Stock status of condom with FWVs: With regard to condom, the level of stock-out and potential stock-out after receipt was the least with FWVs in cell-III (10%) but it was the highest for this cell (27%) at the end of the month. For other two cells, its level was the same at the end of the month (18%) but it was higher for cell-II (13%) than in cell-I (11%). Like pill, over-stock of condom with FWV at the end of the month was also found to be very high: 60 percent for method-I, 54 percent for method-II and 38 percent for method-III (Table-6.6 and Fig. 6.5).

Table 6.6: Average stock status of condom with the FWVs after receipt and at the end of the month

[Figures in number and percentage]

Month of stock (MOS)	Cell - I		Cell - II		Cell - III	
	AR	EM	AR	EM	AR	EM
0-stock (Stock-out)	6 (4.0)	17 (9.4)	16 (9.6)	29 (12.2)	7 (4.4)	15 (7.8)
>0 - ≤1 (Potential stock-out)	10 (6.7)	17 (9.4)	5 (3.0)	12 (5.9)	9 (5.6)	36 (18.8)
>1 - ≤2 (Under stock)	12 (8.0)	23 (12.7)	11 (6.6)	22 (10.8)	27 (16.9)	36 (18.8)
>2 - ≤3 (Adequate stock)	10 (6.7)	15 (8.3)	26 (15.6)	31 (15.2)	36 (22.5)	32 (16.7)
3+ (Over stock)	112 (74.7)	109 (60.2)	109 (65.3)	110 (53.9)	81 (50.6)	73 (38.0)
N	150	181	167	204	160	192

Source: MIS Form # 3

Note: N : Number of FWAs
AR : Stock on hand after receipt
EM : Stock on hand at the end of the month
( ): Indicate percentage

STOCK STATUS OF CONDOM WITH FWVs AFTER RECEIPT AND AT THE END OF MONTH

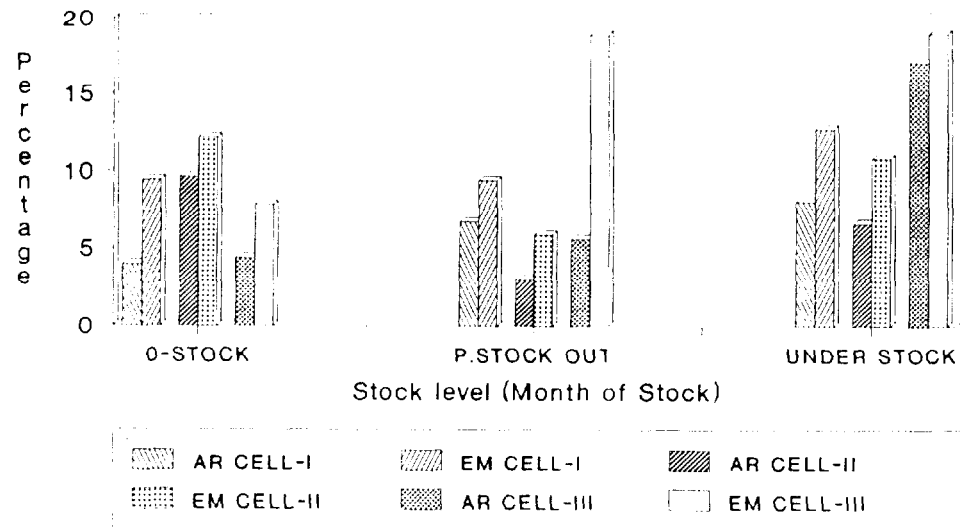


Fig.6.5

NOTE:AR=AFTER RECEIPT,
EM:AT THE END OF MONTH, P:POTENTIAL

Stock status of IUD with FWVs: After receipt, a sizeable percentage of FWVs in all the three cells (cell-I 4%, cell-II 5% and cell-III 6%) did not have any stock or had stock for one month or less for IUD. This had increased substantially for FWVs in cell-II, followed by those in cell-III. It is important to note that a large proportion of FWVs in all the cells had over stock of IUD at the end of the month -- 84 percent in cell-I, 63 percent in cell-II and 70 percent in cell-III (Table-6.7 and Fig. 6.6).

Table 6.7: Stock status of IUDs with the FWVs after receipt and at the end of the month

[Figures in number and percentage]

Month of stock (MOS)	Cell - I		Cell - II		Cell - III	
	AR	EM	AR	EM	AR	EM
0-stock (Stock-out)	7 (4.5)	9 (4.8)	7 (4.1)	17 (7.7)	1 (0.7)	5 (2.3)
>0 - ≤1 (Potential stock-out)	0 (0.0)	3 (1.6)	2 (1.2)	10 (4.5)	8 (5.2)	15 (6.8)
>1 - ≤2 (Under stock)	3 (1.9)	5 (2.7)	14 (8.3)	26 (11.7)	9 (5.8)	23 (10.4)
>2 - ≤3 (Adequate stock)	7 (4.5)	12 (6.5)	24 (14.2)	29 (13.1)	20 (12.9)	23 (10.4)
3+ (Over stock)	138 (89.0)	157 (84.4)	122 (72.2)	140 (63.1)	117 (75.5)	156 (70.3)
Total (N)	**155**	**186**	**169**	**222**	**155**	**222**

Source: MIS Form # 3

Note: N : Number of FWAs
AR : Stock on hand after receipt
EM : Stock on hand at the end of the month
( ): Indicate percentage

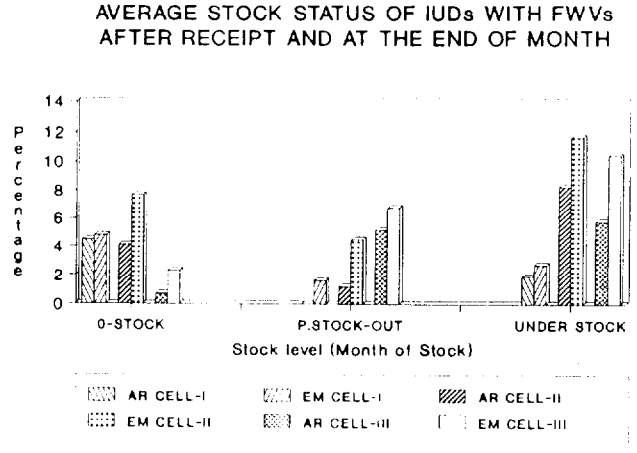


Fig.6.6

NOTE:AR•AFTER RECEIPT,
EM:AT THE END OF MONTH, P:POTENTIAL

Stock status of injectables with FWVs: In case of injectable contraceptives the levels of stock-out and potential stock-out after receipt were lower than those of IUD but they increased substantially at the end of the month, particularly for FWVs in cell-III -- from 2 to 13 percent. On the other hand, like IUD, over-stock of injectable contraceptives with FWVs was quite high -- 54 percent in cell-I, 52 percent in cell-II and 33 percent in cell-III at the end of month (Table-6.8 and Fig.6.7).

Table 6.8: Average stock status of Injectables with the FWVs after receipt and at the end of the month

[Figures in number and percentage]

Month of stock (MOS)	Cell - I		Cell - II		Cell - III	
	AR	EM	AR	EM	AR	EM
0-stock (Stock-out)	2 (1.3)	7 (3.8)	6 (3.3)	14 (6.3)	0 (0.0)	2 (0.9)
>0 - ≤1 (Potential stock-out)	3 (1.9)	11 (5.9)	1 (0.5)	8 (3.6)	3 (1.9)	27 (12.2)
>1 - ≤2 (Under stock)	6 (3.9)	23 (12.4)	7 (3.8)	28 (12.6)	18 (11.3)	60 (27.0)
>2 - ≤3 (Adequate stock)	15 (9.7)	44 (23.7)	19 (10.3)	57 (25.7)	50 (31.3)	60 (27.0)
3+ (Over stock)	129 (83.2)	101 (54.3)	151 (82.1)	115 (51.8)	89 (55.6)	73 (32.9)
Total (N)	**155**	**186**	**184**	**222**	**160**	**222**

Source: MIS Form # 3

Note: N : Number of FWAs
AR : Stock on hand after receipt
EM : Stock on hand at the end of the month
( ): Indicate percentage

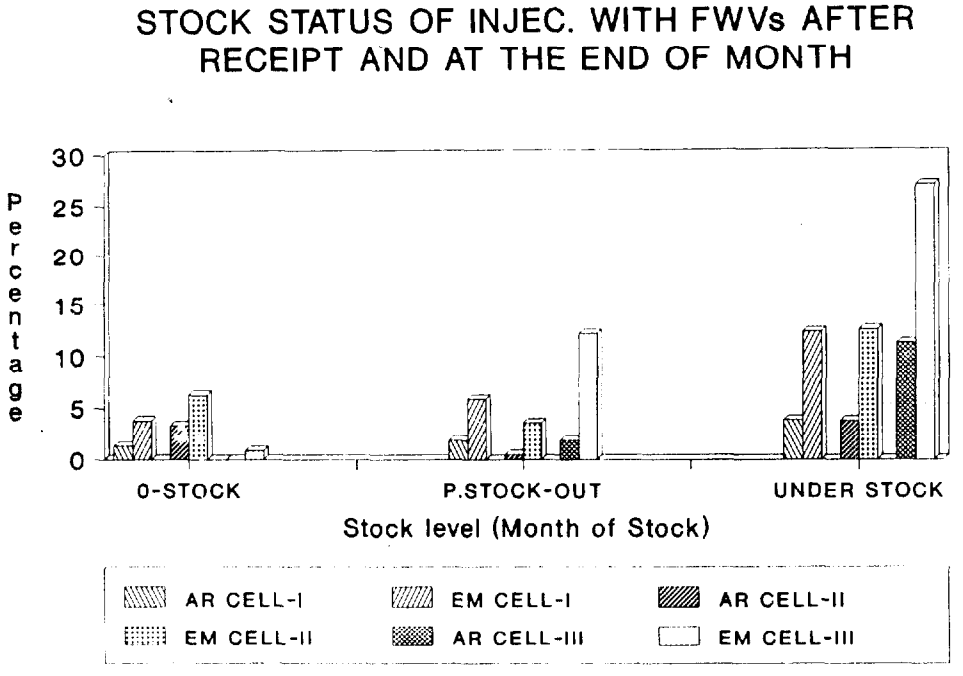


Fig.6.7

NOTE:AR=AFTER RECEIPT,
EM:AT THE END OF MONTH, P:POTENTIAL

6.5. Correctness of Calculation of Monthly Demand/Requirements of Contraceptive Commodities (Pill and Condom)

Three different procedures were followed to calculate the monthly demand/requirements of pill and condom for the FWAs and FWVs. Demand calculation following method-I and method-II was done at the thana level by storekeepers and for method-III (i.e. the existing method) it was done by FWA/FWVs themselves.

It is observed that the majority (53%) of the FWAs and FWVs made mistakes in calculating their monthly demand for pill following the existing system (i.e. method-III/Cell-III). More of the FWVs (63%)

compared to the FWAs (51%) made mistake in the calculation. In cell-I (method-I), monthly demand/requirements were made correctly for a large majority of FWAs (94%) and FWVs (93%). In cell-II (i.e. method-II) also demand calculation for pill were done correctly by a large proportion of FWAs (87%) and FWVs (95%). For method-III, only 49 percent of the FWAs and 37 percent of the FWVs made the calculation correctly (Table-6.9).

Table 6.9: Calculation of monthly demand/requirements of pills by methods/cells

[Figures in number and percentage]

Cells/ methods	FWAs			FWVs		
	Correct	Incorrect	Total	Correct	Incorrect	Total
I	135 (94.4)	8 (5.6)	143 (100.0)	29 (93.5)	2 (6.5)	31 (100.0)
II	146 (86.9)	22 (13.1)	168 (100.0)	35 (94.6)	2 (5.4)	37 (100.0)
III	95 (49.0)	99 (51.0)	194 (100.0)	13 (37.1)	22 (62.9)	35 (100.0)

Note: 1. Six months' (January-June'95) average figures.

2. Figures in parentheses indicate percentage.

For condom also, the percentages of FWAs and FWVs making correct calculation were very high for method-I, followed by method-II. But in case of method-III it was quite low: 55 percent of FWAs and 46 percent FWVs (Table-6.10).

Table 6.10: Calculation of monthly demand/requirements of condom by methods/cells

[Figures in number and percentage]

Cells/ methods	FWAs			FWVs		
	Correct	Incorrect	Total	Correct	Incorrect	Total
I	131 (91.6)	12 (8.4)	143 (100.0)	28 (90.3)	3 (9.7)	31 (100.0)
II	145 (86.3)	23 (13.7)	168 (100.0)	35 (94.6)	2 (5.4)	37 (100.0)
III	106 (54.9)	87 (45.1)	193 (100.0)	16 (45.7)	19 (54.3)	35 (100.0)

Note: 1. Six months' (January-June'95) average figures.
2. Figures in parentheses indicate percentage.

6.6. Observations on Pre-intervention and Post-intervention Stock Status

The principal hypothesis of the study is that a substantial part of the problems of stock-outs at the peripheral levels can be solved i.e. the stock-out can be minimized by technical adjustments in the distribution system or switching from the existing 'pull' to 'push' system of distribution. The appropriate variant of the 'push' system may be determined between the two variants tested in this study. The stock analysis presented in this sub-section will give a picture on tne level of stock imbalances with regard to the existing pull system and the two variants of push system, especially the stock-out and potential stock-out situation with the FWAs and FWVs. This analysis will help to determine the efficiency of the methods in reducing the level of stock-out and potential stock-out at the peripheral level and thereby will help to choose an appropriate method of distribution of contraceptive commodities.

6.6.1. Physical stock status with the FWAs/FWVs

The stocks of contraceptives with the FWAs/FWVs were physically counted on four occasions viz.

- During the pre-intervention survey, conducted from 17 November through 25 November'94 in Rangpur DRS thanas and from 28 November through 10 December'94 in Chittagong DRS thanas.

- During the interim stock level surveys with a sample of FWAs/FWVs. The first survey was conducted during the period from 23 March through 30 March'95 and the second during the period from 23 May through 30 May'95 in both Rangpur and Chittagong DRS.

- The post-intervention survey was conducted during the period from 20 June through 30 June'95.

At the time of the physical count the field officers also gathered information on distribution of contraceptives during the two to four months period preceding the date of the physical count to calculate their monthly demand.

Physical count with the FWAs

Pill: It was observed that 2 to 3 percent of FWAs had stock-out of pill in cell-I and cell-III but there was no such cases in the post-survey. In cell-II, the stock-out cases were quite high (8%) which declined sharply in the post-survey (2%). The pre-survey showed that the percentages of FWAs having potential stock-out were high in the three cells -- 25 percent in cell-I, 22 percent in cell-II and 18 percent in cell-III. After the intervention as found in the post-survey it declined very sharply in cell-I (6%), followed by cell-II (14%). In cell-III, it rather increased slightly (Table-6.11).

Table 6.11: Stock status of pill with the FWAs as found in the physical inventory performed during the four surveys

[Figures in number and percentage]

Months of stock (MOS)	Cell I				Cell II				Cell III			
	Pre-Ins	ISS_1	ISS_2	Post-Ins	Pre-Ins	ISS_1	ISS_2	Post-Ins	Pre-Ins	ISS_1	ISS_2	Post-Ins
0 - Stock (Stock-out)	3 (2.1)	1 (2.6)	0 (0.0)	0 (0.0)	15 (7.6)	3 (6.1)	0 (0.0)	4 (2.2)	5 (2.9)	0 (0.0)	1 (2.1)	0 (0.0)
> 0 - ≤1 (Potential stock-out)	35 (25.2)	0 (0.0)	2 (5.1)	7 (5.5)	43 (21.8)	9 (18.4)	8 (17.4)	25 (13.9)	31 (17.7)	11 (22.9)	10 (21.2)	24 (14.6)
> 1 - ≤2 (Under stock)	46 (33.1)	22 (57.9)	13 (33.3)	29 (22.9)	53 (26.9)	16 (32.6)	23 (50.0)	65 (36.3)	55 (31.4)	26 (54.2)	28 (59.6)	87 (53.1)
> 2 - ≤3 (Adequate stock)	20 (14.4)	11 (28.9)	19 (48.8)	66 (51.9)	40 (20.3)	18 (36.7)	9 (19.5)	66 (37.0)	55 (31.4)	8 (16.7)	8 (17.0)	42 (25.6)
3 + (Over stock)	35 (25.2)	4 (10.6)	5 (12.9)	25 (19.6)	46 (23.4)	3 (6.1)	6 (13.2)	19 (10.6)	29 (16.6)	3 (6.3)	0 (0.0)	11 (6.7)
Total	139 (100.0)	38 (100.0)	39 (100.1)	127 (99.9)	197 (100.0)	49 (99.9)	47 (100.1)	179 (100.0)	171 (100.0)	48 (100.1)	47 (99.9)	164 (100.0)

Note: Pre-Ins = Pre-intervention survey conducted during the period from 17 November through 25 November'94 in Rangpur DRS thanas, from 28 November through 10 December'94 in Chittagong DRS thanas.

ISS_1 = First interim stock level survey conducted during the period from 23 March through 30 March'95.

ISS_2 = Second interim stock level survey conducted during the period from 23 May through 30 March'95.

Post-Ins = Post-intervention survey conducted during the period from 20 June through 30 June'95.

( ) = Indicate percentage

Condom: It was found in the pre-intervention survey that about one-third of the FWAs in cell-I and cell-III and 44 percent in cell-II had stock-out or potential stock-out of condom. In the post-survey, the situation did not change much for method-I, but it increased substantially for method-II, followed by method-III. Over-stock level declined over time for all methods but it declined very sharply for method-III (Table-6.12).

Physical count with the FWVs

Pills: None of the FWVs in cell-I was found with 0-stock in any of the four surveys (Table-6-13). Furthermore, none of the FWVs in this cell was found to have potential stock-out in the second interim survey and post-survey though there were some potential stock-out cases found during the first two surveys. Stock-out cases were also very few in cell-II. In case of cell-III, except for a few cases in the pre-survey there was no FWV with 0-stock of pill. Quite a few FWVs were found to have potential stock out both in cell-II and cell-III. The over stock of pill increased in cell-I while it declined in cell-II. It did not change over time (36%) in cell-III. It may be mentioned that two-thirds of the FWVs in cell-I and over one half of the FWVs in cell-II had over stock of pill. It was also observed that though the expected stock level remained at a low level for all the three methods, it increased very sharply for method-I (from 18% to 33%) over time, followed by method-II. But in case of method-III, it rather declined (from 29% to 18%).

Table 6.12: Stock status of condom with the FWAs as found in the physical inventory performed during the four surveys

[Figures in number and percentage]

Months of stock (MOS)	Cell - I				Cell - II				Cell - III			
	Pre-Ins	ISS_1	ISS_2	Post-Ins	Pre-Ins	ISS_1	ISS_2	Post-Ins	Pre-Ins	ISS_1	ISS_2	Post-Ins
0 - Stock (Stock-out)	6 (4.3)	0 (0.0)	1 (2.6)	9 (7.1)	42 (22.1)	2 (4.1)	9 (19.6)	34 (19.9)	14 (8.4)	2 (8.4)	4 (8.5)	12 (7.5)
> 0 - ≤1 (Potential stock-out)	39 (28.0)	6 (15.8)	13 (33.3)	36 (28.6)	41 (21.6)	6 (12.2)	14 (30.4)	48 (28.0)	40 (24.1)	10 (20.9)	20 (42.5)	52 (32.3)
> 1 - ≤2 (Under stock)	33 (23.8)	6 (15.8)	10 (25.6)	33 (26.2)	32 (16.8)	13 (26.5)	11 (23.4)	23 (13.4)	30 (18.1)	18 (37.5)	9 (19.2)	45 (27.9)
> 2 - ≤3 (Adequate stock)	24 (17.3)	12 (31.6)	8 (20.5)	23 (18.2)	21 (11.1)	9 (18.4)	4 (8.7)	27 (15.8)	16 (9.6)	8 (16.7)	8 (17.0)	27 (16.8)
3 + (Over stock)	37 (26.7)	14 (36.9)	7 (18.0)	25 (19.9)	54 (28.4)	19 (38.7)	8 (17.4)	39 (22.8)	66 (39.8)	10 (20.8)	6 (12.8)	25 (15.5)
Total	139 (100.1)	38 (100.1)	39 (100.0)	126 (100.0)	190 (100.0)	49 (99.9)	46 (100.0)	171 (99.9)	166 (100.0)	48 (100.1)	47 (100.0)	161 (100.0)

Note: Pre-Ins = Pre-intervention survey conducted during the period from 17 November through 25 November'94 in Rangpur DRS thanas, from 28 November through 10 December'94 in Chittagong DRS thanas.

ISS_1 = First interim stock level survey conducted during the period from 23 March through 30 March'95.

ISS_2 = Second interim stock level survey conducted during the period from 23 May through 30 March'95.

Post-Ins = Post-intervention survey conducted during the period from 20 June through 30 June'95.

( ) = Indicate percentage.

Table 6.13: Stock status of pills with the FWVs as found in the physical inventory performed during the four surveys

[Figures in number and percentage]

Months of stock (MOS)	Cell - I				Cell - II				Cell - III			
	Pre-Ins	ISS_1	ISS_2	Post-Ins	Pre-Ins	ISS_1	ISS_2	Post-Ins	Pre-Ins	ISS_1	ISS_2	Post-Ins
0 - Stock (Stock-out)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (5.6)	0 (0.0)	2 (8.3)	0 (0.0)	2 (6.5)	0 (0.0)	0 (0.0)	0 (0.0)
> 0 - ≤1 (Potential stock-out)	2 (7.1)	2 (10.6)	0 (0.0)	0 (0.0)	2 (5.6)	1 (3.8)	1 (4.2)	2 (6.1)	1 (3.2)	5 (26.3)	2 (10.5)	2 (7.1)
> 1 - ≤2 (Under stock)	5 (17.9)	2 (10.6)	2 (11.8)	1 (4.2)	6 (16.7)	5 (19.2)	6 (25.0)	5 (15.2)	8 (25.8)	6 (31.6)	9 (47.4)	11 (39.3)
> 2 - ≤3 (Adequate stock)	5 (17.9)	5 (26.3)	4 (23.5)	8 (33.4)	2 (5.6)	4 (15.4)	7 (29.2)	9 (27.3)	9 (29.1)	3 (15.8)	2 (10.6)	5 (17.9)
3 + (Over stock)	16 (57.8)	10 (52.6)	11 (64.7)	15 (62.5)	24 (66.7)	16 (61.5)	8 (33.3)	17 (51.5)	11 (35.4)	5 (26.4)	6 (31.6)	10 (35.7)
Total	28 (100.0)	19 (100.1)	17 (100.0)	24 (100.1)	36 (100.1)	26 (99.9)	24 (100.0)	33 (100.0)	31 (100.0)	19 (100.1)	19 (100.1)	28 (100.0)

Note: Pre-Ins = Pre-intervention survey conducted during the period from 17 November through 25 November'94 in Rangpur DRS thanas, from 28 November through 10 December'94 in Chittagong DRS thanas.

ISS_1 = First interim stock level survey conducted during the period from 23 March through 30 March'95.

ISS_2 = Second interim stock level survey conducted during the period from 23 May through 30 March'95.

Post-Ins = Post-intervention survey conducted during the period from 20 June through 30 June'95.

( ) = Indicate percentage.

Condom: A few of the FWVs had 0-stock of condom both in cell-I and cell-III. In cell-II quite a substantial proportion of FWVs had 0-stock of condom as found in all the surveys. Potential stock-out declined substantially in cell-II over time. In the other two cells it remained more or less at a low level. Over stock of condom declined very sharply both in cell-I and cell-III from 71 percent to 46 percent in cell-I and 52 percent to 27 percent in cell-III (Table 6.14).

Table 6.14: Stock status of condom with the FWVs as found in the physical inventory during the four surveys

[Figures in number and percentage]

Months of stock	Cell - I				Cell - II				Cell - III			
	Pre-Ins	ISS_1	ISS_2	Post-Ins	Pre-Ins	ISS_1	ISS_2	Post-Ins	Pre-Ins	ISS_1	ISS_2	Post-Ins
0 - Stock (Stock-out)	0 (0.0)	3 (15.8)	1 (5.9)	1 (4.5)	7 (23.3)	8 (30.8)	7 (29.2)	5 (17.9)	2 (6.9)	2 (10.5)	1 (5.3)	0 (0.0)
> 0 - ≤1 (Potential stock-out)	2 (8.4)	5 (26.3)	2 (11.8)	3 (13.6)	6 (20.0)	0 (0.0)	1 (4.2)	2 (7.1)	4 (13.8)	7 (36.8)	2 (10.5)	3 (11.5)
> 1 - ≤2 (Under stock)	4 (16.7)	1 (5.3)	1 (5.9)	4 (18.1)	3 (10.0)	1 (3.9)	6 (25.0)	7 (25.0)	4 (13.8)	3 (15.8)	5 (26.3)	10 (38.4)
> 2 - ≤3 (Adequate stock)	1 (4.2)	1 (5.3)	1 (5.9)	4 (18.2)	1 (3.3)	2 (7.6)	1 (4.2)	2 (7.1)	4 (13.8)	1 (5.3)	4 (21.0)	6 (23.1)
3 + (Over stock)	17 (70.8)	9 (47.4)	12 (70.6)	10 (45.5)	13 (43.3)	15 (57.6)	9 (37.6)	12 (42.8)	15 (51.7)	6 (31.7)	7 (36.9)	7 (26.9)
Total	24 (100.1)	19 (100.1)	17 (100.1)	22 (99.9)	30 (99.9)	26 (99.9)	24 (100.2)	28 (99.9)	29 (100.0)	19 (100.1)	19 (100.0)	26 (99.9)

Note: Pre-Ins = Pre-intervention survey conducted during the period from 17 November through 25 November'94 in Rangpur DRS thanas, from 28 November through 10 December'94 in Chittagong DRS thanas.

ISS_1 = First interim stock level survey conducted during the period from 23 March through 30 March'95.

ISS_2 = Second interim stock level survey conducted during the period from 23 May through 30 March'95.

Post-Ins = Post-intervention survey conducted during the period from 20 June through 30 June'95.

( ) = Indicate percentage.

6.6.2. Stock status based on monthly reports of FWAs/FWVs

In addition to the four independent physical inventories of contraceptives with FWAs/FWVs conducted at different times during the study period, data on monthly distribution and the balance on hand at the end of the month were gathered from MIS form-2 and 3 for 18 months (January'94 to June'95). These data were used to compare the stock status (balance on hand) of FWAs/FWVs at the end of the month in two periods, the pre-intervention period and the post-intervention period. The data on stock on hand were converted into months of stock following the procedure mentioned earlier in the introduction part of this section (page-124). For pre-intervention period, months of stock were calculated for six months (i.e. July'94 - December'94) and for the post-intervention period it was the study period from January'95 to June'95. Again, to compare directly the stock situation between the two periods the stock status of individual months was converted into the six months' average stock status as below:

$$\text{Average stock status} = \frac{\text{Sum of the cases (FWAs/FWVs) of individual month in a particular stock level}}{\text{Sum of the total number of FWAs/FWVs for each month}}$$

e.g. the average stock-out status of FWAs in cell-I in pre-intervention period

$$= \frac{\text{Sum of stock-out cases (FWAs) in July to December}}{\text{Sum of total number of FWAs for each month}}$$

Average stock status with the FWAs

Pill: The average percentage of FWAs with stock-out and potential stock-out during the study period was much lower than the average percentage of FWAs having the same stock status during the previous six months period for all the three methods, the difference being very prominent for method-I. The percentage

of FWAs having over-stock increased slightly during the study period for method-I, but it declined to a large extent for other two methods (Table-6.15 and Fig. 6.8).

Table 6.15: Monthly average stock status of Pill with the FWAs at the end of the month before and after intervention

[Figures in percentage]

Month of stock (MOS)	Method - I		Method - II		Method - III	
	Before	After	Before	After	Before	After
0-stock (Stock-out)	2.99	1.97	19.63	4.80	5.07	2.56
>0 - ≤1 (Potential stock-out)	31.72	5.56	19.54	13.42	26.12	19.91
>1 - ≤2 (Under stock)	31.72	29.05	22.00	43.68	34.36	55.13
>2 - ≤3 (Adequate stock)	19.54	47.11	14.38	25.66	18.99	15.98
3+ (Over stock)	14.02	16.32	24.45	12.44	15.46	6.41
N	**870**	**864**	**1182**	**1021**	**1164**	**1170**

Source: MIS form # 2

Note: Average stock status: Six months' average before intervention July-December'94, and after intervention January-June'95

N = Total number of FWAs

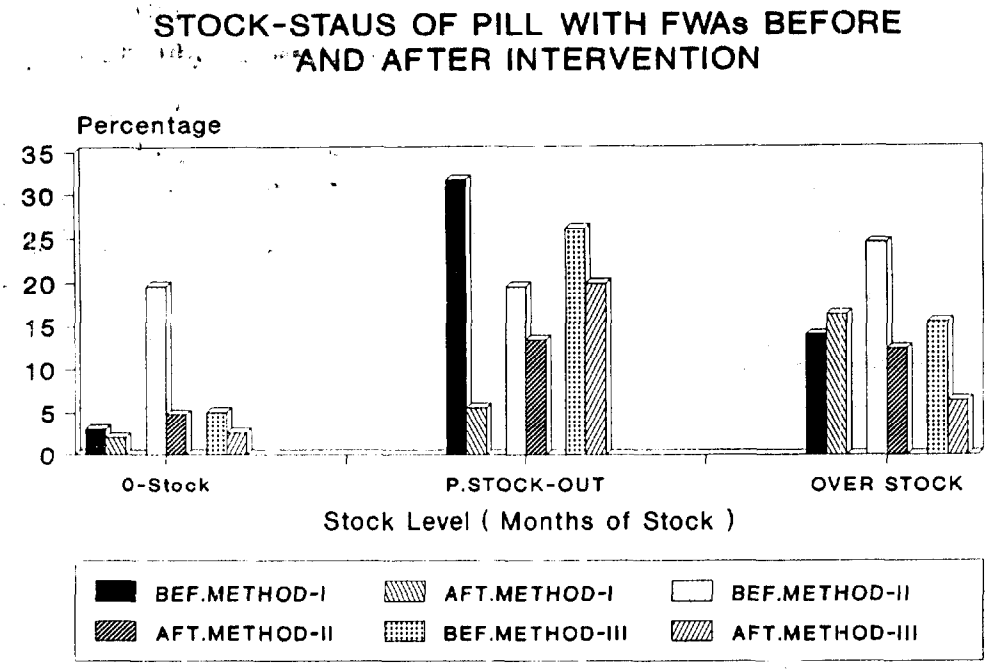


Fig 6.8

NOTE: SIX MONTHS' AVERAGE,AFT.:AFTER INTERVENTION, BEF.:BEFORE INTERVENTION

Trends of stock status of pill with the FWAs

The stock status of pill with FWAs at the end of each month during the period of July'94 to June'95 for method-I, method-II and method-III is presented in Fig. 6.9, 6.10 and 6.11 respectively.

It has been observed that stock-out remained at a low level across all the months, the potential stock-out declined drastically during the study period and the expected stock level increased to a great extent for method-I. The over stock level remained almost the same over the period (Fig. 6.9).

For method-II, the stock-out level declined very sharply during the study period, but the level of potential stock level remained nearly unchanged. Though it remained at a low level, the

expected stock level has improved and the over stock level declined significantly (Fig. 6.10).

In case of method-III, the level of 0-stock, potential stock-out as well as the expected stock level remained more or less at the same position. Under stock situation (≤2 months stock) has increased dramatically (Fig. 6.11).

Compared to other two methods, overall, the zero stock level and potential stock-out level for method-I declined during the study period and the expected stock level (2 to 3 months of stock) also increased uniformly, indicating that the changes which occurred in method-I were more stable than those in the other methods.

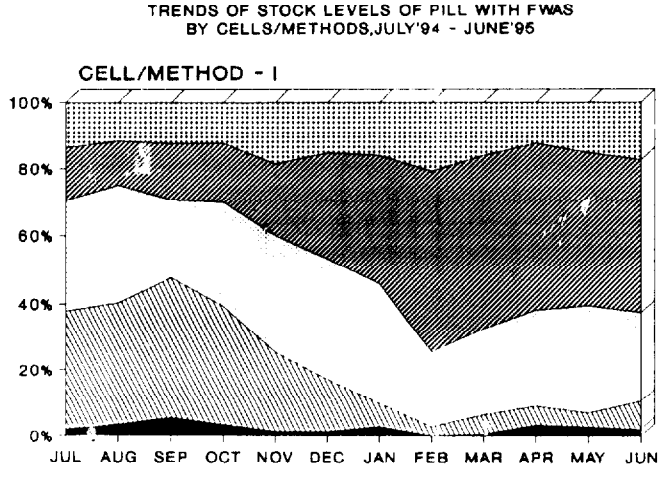


FIG.6.9

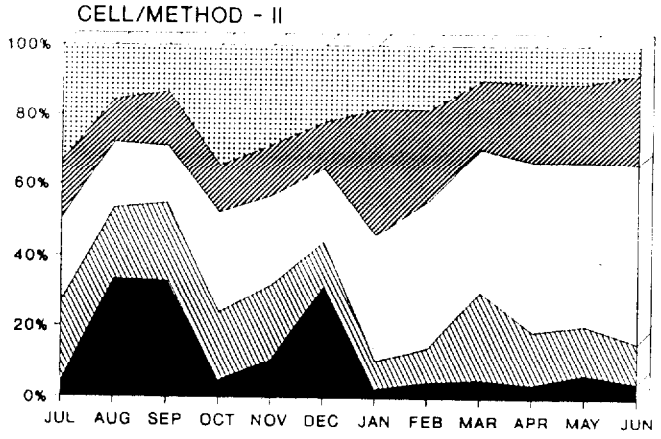


FIG.6.10

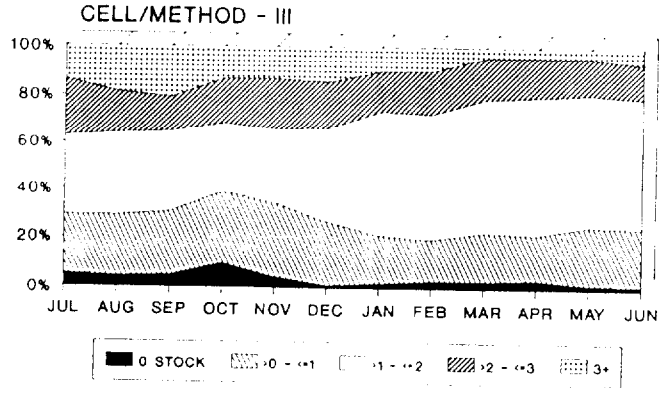


FIG.6.11
NOTE:JULY-DEC. PRE-INTERVENTION PERIOD
JANU-JUNE POST INTERVENTION PERIOD

Condom: The stock-out level of condom was between 4 to 8 percent both before and during the study period for method-I and method-II. For method-II it was as high as 28 percent before the intervention and declined to 15 percent during the study period, still remaining quite high. Among the three methods, the level of potential stock-out for method-I declined from 29 percent to 21 percent. But for other two methods it rather increased, from 25 percent to 29 percent for method-III and from 17 percent to 18 percent for method-II. On the other hand, over a quarter of FWAs in cell-I and cell-II and 21 percent in cell-III had over stock of condom during the study period. Among the three methods, expected level of stock was the highest for method-I during the study period (Table-6.16 and Fig. 6.12).

Table 6.16: Average monthly stock status of Condom with the FWAs at the end of the month before and after intervention

[Figures in percentage]

Month of stock (MOS)	Method - I		Method - II		Method - III	
	Before	After	Before	After	Before	After
0-stock (Stock-out)	3.84	6.86	27.80	14.60	8.26	7.30
>0 - ≤1 (Potential stock-out)	29.30	21.40	16.61	18.05	25.39	28.52
>1 - ≤2 (Under stock)	25.35	23.95	13.47	21.89	19.71	28.87
>2 - ≤3 (Adequate stock)	13.37	21.63	11.80	17.95	14.11	14.43
3+ (Over stock)	28.60	26.16	30.34	27.51	32.53	20.88
N	**870**	**860**	**1180**	**1014**	**1162**	**1164**

Source: MIS Form-2

Note: Average stock status: Six months' average before intervention, July-December'94, and after intervention January-June'95

N = Total number of FWAs

Trends of stock level of condom with FWAs

The stock-out level of condom in cell-I remained low throughout the period but increased to some extent from April'95. The potential stock-out level had an increasing trend reaching to about 40 percent in January'95 but it suddenly dropped to about 15 percent in February and then went on increasing reaching to 40 percent in June'95. The expected stock level increased to a large extent in February'95 and then gradually declined. The over stock level more or less followed the same trend with an increase in February and then it narrowed down (Fig. 6.13).

In cell-II, stock-out level was quite high (nearly 40%) during the six month period before the intervention but it declined very sharply in January'95 and maintained the same level (about 10%) up to March'95. It then got an increasing trend reaching to 20 percent in June'95. Potential stock-out more or less remained at the same level over time (about 10%) with a decreasing trend from December'94 to February'95. Expected stock level received an increasing trend reaching to 10 percent in June'95. The over stock level decreased over time having a sudden increase in February'95 (Fig. 6.14).

In respect of method-III (i.e. cell-III), the stock-out level remained at the 10 percent level with some decrease in January to March. The potential stock-out level got an increasing trend in September'94 which again took a downward trend in December'94 to February'95. It then increased sharply in April'95 and remained more or less at the same level up to June'95 (about 30%) (Fig. 6.15).

With some fluctuations, the expected stock level (2 to 3 MOS) remained at or about 10 percent over the one year period. The over stock level declined very sharply after the intervention period.

Considering the trends of monthly stock status of condom with the FWAs in the three cells it seems that among the three methods, method-I was more efficient to reduce the level of stock-out and potential stock-out of condom.

STOCK STATUS OF CONDOM WITH FWAs BEFORE AND AFTER INTERVENTION

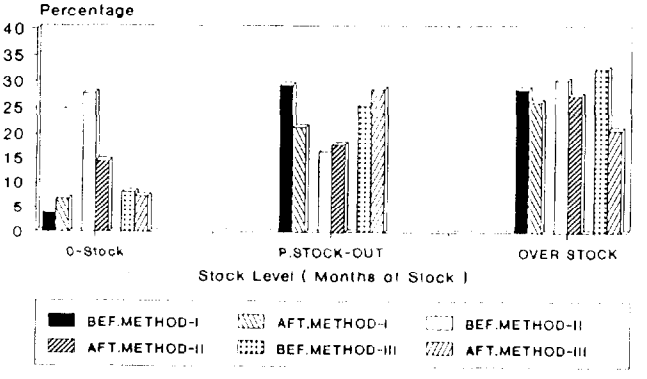


Fig 6.12

NOTE: SIX MONTHS' AVERAGE,BEF.:BEFORE INTERVENTION,AFT.:AFTER INTERVENTION

TRENDS OF STOCK LEVELS OF CONDOM WITH FWAs BY CELLS/METHODS,JULY'94 - JUNE'95

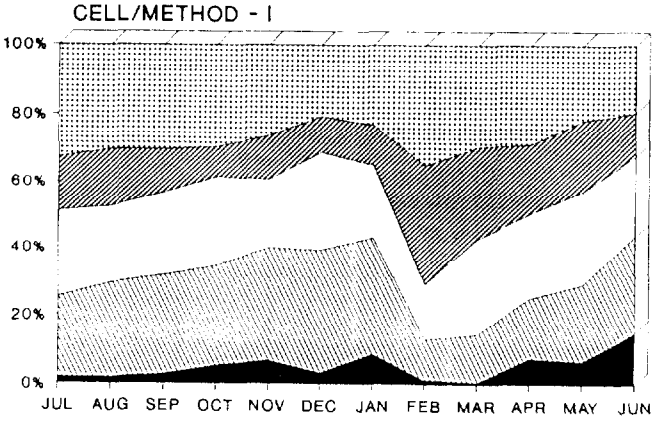


FIG.6.13

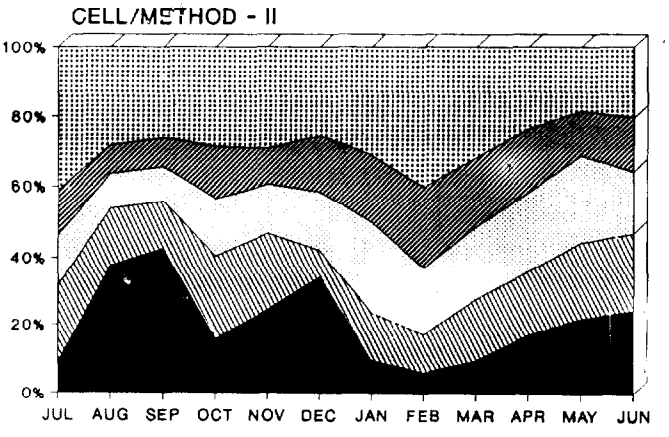


FIG.6.14

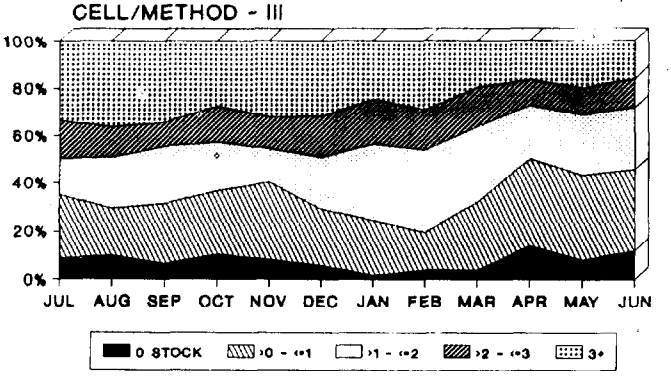


FIG.6.15
NOTE:JULY-DEC.PRE INTERVENTION PERIOD
JANU-JUNE POST INTERVENTION PERIOD

Average stock status with the FWVs

Pill: It can be seen from Table-6.6.7 that on an average 9 to 17 percent of FWVs in the three cells were out of stock of pill in the six month period prior to the intervention. After the intervention this percentage went down and ranged between 2 and 7 percent. The decline was very sharp in case of method-III. The level of potential stock-out was around 10 percent in cell-I and cell-II before the intervention and it went down to 3 percent after the intervention in each of these two cells. For method-III the level of potential stock-out was as high as 16 percent and it increased to 19 percent after the intervention. Over stock level increased substantially (by 10 percentage points) for method-I and III. About 57 percent of the FWVs in cell-I, 52 percent in cell-II and 43 percent in cell-III had more than 3 months of stock of pill after the intervention (Table-6.17 and Fig. 6.16).

Table 6.17: Average stock status of pill with the FWVs at the end of the month before and after intervention

[Figures in percentage]

Month of stock (MOS)	Method - I		Method - II		Method - III	
	Before	After	Before	After	Before	After
0-stock (Stock-out)	9.14	5.91	16.67	6.91	10.75	1.80
>0 - ≤1 (Potential stock-out)	9.14	3.23	10.32	3.22	15.59	18.92
>1 - ≤2 (Under stock)	20.43	18.28	13.10	18.89	20.97	24.77
>2 - ≤3 (Adequate stock)	15.60	15.59	7.94	19.35	19.35	11.71
3+ (Over stock)	45.70	56.99	52.00	51.61	33.33	42.79
N	186	186	252	217	186	222

Source: MIS form # 3

Note: Average stock status: Six months' average before intervention July-December'94, and after intervention January-June'95

N = Total number of FWVs

Trends of stock level of pill with FWVs

For method-I, the level of stock-out and potential stock-out at the end of the months remained below 10 percent beginning from October'94 which increased in May'95 and declined very sharply coming down to 5 percent in June'95. The trend for stock-out/ potential stock-out was found to be quite stable with a declining trend from February'95 (Fig. 6.17).

The percentage of FWVs with 0-stock of pill in cell-II (method-II) was well above 10. It reached at a pick of 25 percent in December'94 and in January'95 it dropped to about 5 percent. With some fluctuations in the following months it reached up to about 10 percent in June'95. The trend of stock-out over the period was not even. The level of monthly potential stock-out was quite low after the intervention compared to the pre-intervention period (Fig. 6.18).

In case of method-III, the levels of stock-out at the end of the months after the intervention period were very low compared to those in the pre-intervention period. But the levels of potential stock-out got an increasing trend which remained more or less at the same level over time reaching up to about 20 percent in June'95 (Fig. 6.19).

The over stock level for all the three methods was very high (over 40%) across the 12 month period. The expected stock level was quite low for all the three methods. For method-I, the percentages of expected level of stock were uniform after the intervention being at a level of about 20 percent by the end of June'95.

STOCK STATUS OF PILL WITH FWVs BEFORE AND AFTER INTERVENTION

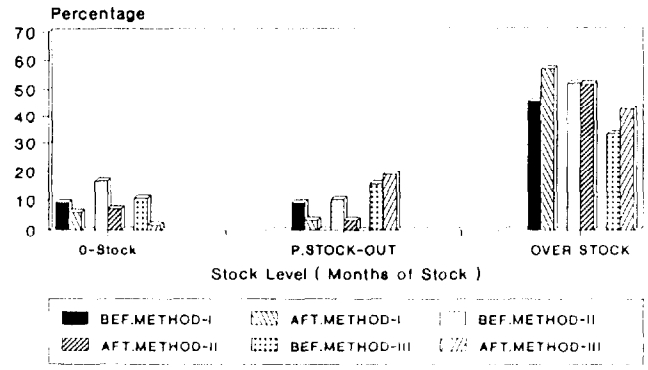


Fig.6.16

NOTE: SIX MONTHS' AVERAGE, BEF.:BEFORE INTERVENTION,AFT.: AFTER INTERVENTION

TRENDS OF STOCK LEVELS OF PILL WITH FWVs BY CELLS/METHODS,JULY'94 - JUNE'95

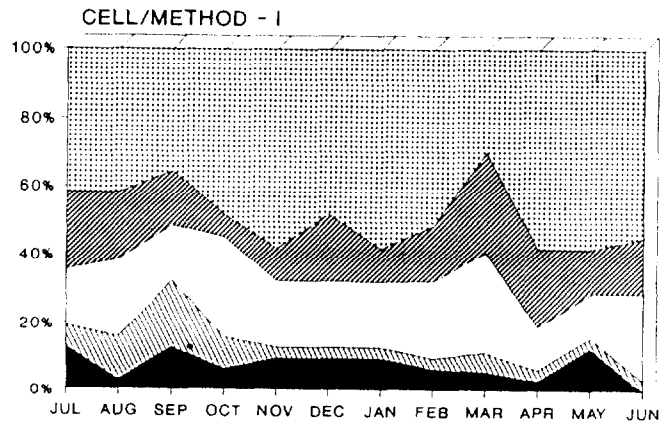


FIG.6.17

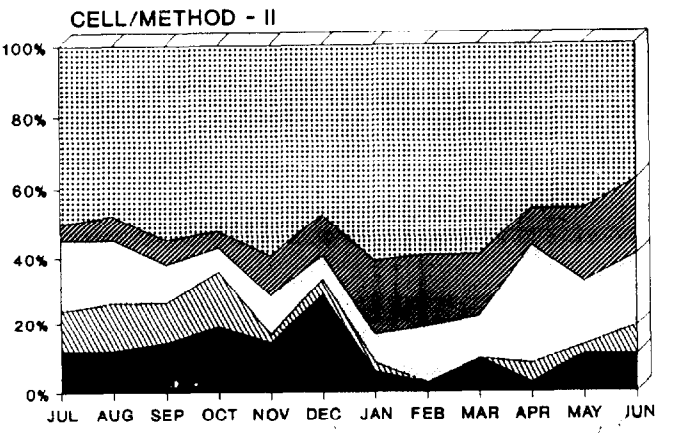


FIG.6.18

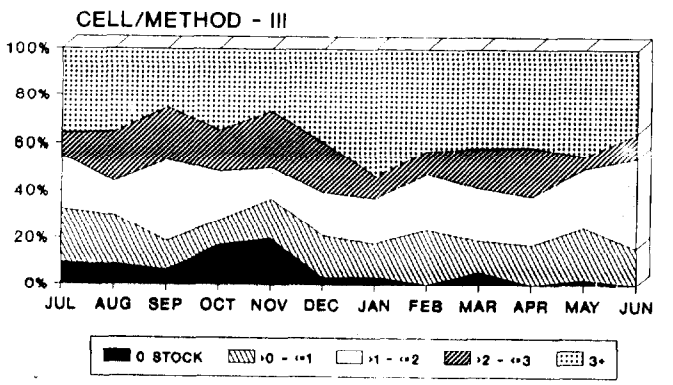


FIG.6.19
NOTE:JULY-DEC.PRE INTERVENTION PERIOD
JANU-JUNE POST INTERVENTION PERIOD

Condom: Although the shortage in stock of condom was prevailing all over the country, yet the stock-out level of condom declined to a large extent after the intervention in all the experimental cells. But even then the percentages of FWVs with stock-out or potential stock-out were high after intervention for all the methods: 19 percent for method-I, 18 percent for method-II and 27 percent for method-III. On the other hand, the percentage of FWVs having over stock of condom was found to be as high as 60 percent for method-I, 54 percent for method-II and 38 percent for method-III after the intervention (Table-6.18 and Fig. 6.20).

Table 6.18: Average stock status of condom with the FWVs at the end of the month before and after intervention

[Figures in percentage]

Month of stock (MOS)	Method - I		Method - II		Method - III	
	Before	After	Before	After	Before	After
0-stock (Stock-out)	18.13	9.39	27.01	12.21	14.05	7.81
>0 - ≤1 (Potential stock-out)	6.04	9.39	8.06	5.88	13.51	18.75
>1 - ≤2 (Under stock)	8.79	12.71	10.48	10.78	13.51	18.75
>2 - ≤3 (Adequate stock)	4.95	8.29	4.84	15.20	14.60	16.67
3+ (Over stock)	62.09	60.22	49.60	53.92	44.32	38.02
N	**182**	**181**	**248**	**204**	**185**	**192**

Source: MIS form # 3

Note: Average stock status: Six months' average before intervention July-December'94, and after intervention January-June'95

N = Total number of FWVs

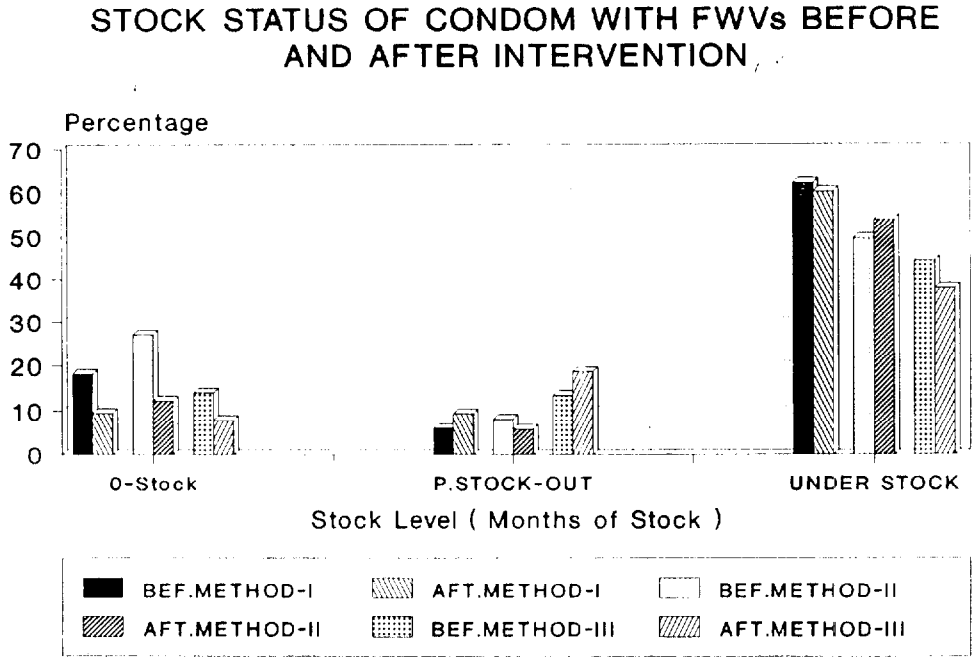


Fig.6.20

NOTE:SIX MONTHS' AVERAGE,BEF.:BEFORE INTERVENTION,AFT.:AFTER INTERVENTION

Trends of stock level of condom with FWVs

The most dominant feature with the trend of stock level of condom in all the three cells was the high level of over stock across all the 12 months. On the other hand quite a large proportion of FWVs had stock-out of condom in all the cells across the whole period. In November and December'94 it went up to 35 percent in cell-II. After the intervention, it took a declining trend for all methods except for method-II. But potential stock-out levels for method-III were quite high (Fig. 6.21, 6.22 and 6.23).

TRENDS OF STOCK LEVELS OF CONDOM WITH FWVs BY CELLS/METHODS,JULY'94 - JUNE'9

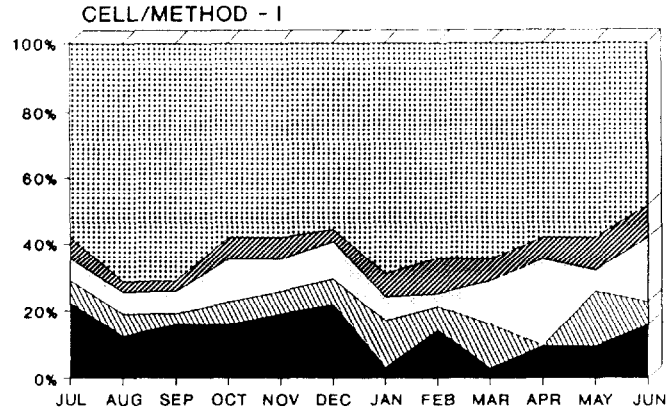


FIG.6.21

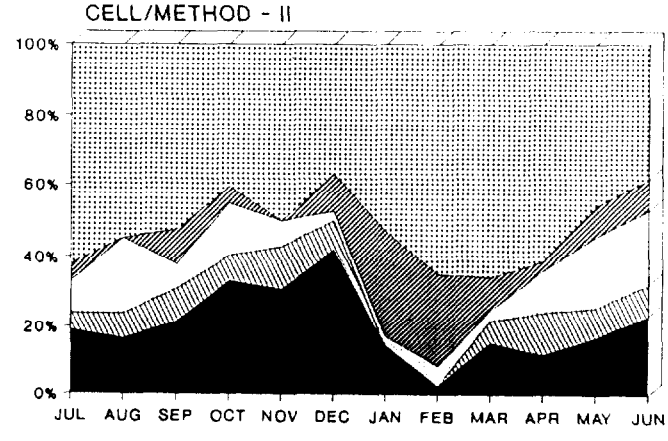


FIG.6.22

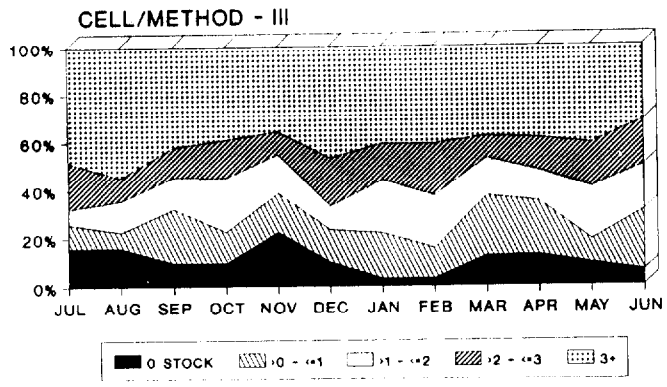


FIG.6.23
NOTE:JULY-DEC.PRE INTERVENTION PERIOD
JANU-JUNE POST INTERVENTION PERIOD

IUDs: The stock-out as well as potential stock-out levels for each of the three methods declined substantially after the intervention but a sizeable proportion of FWVs in all the cells had stock-out or potential stock-out of IUD: 6 percent for method-I, 12 percent for method-II and 9 percent for method-III. Over stock level of IUD was very high both before and after the intervention and it increased significantly after the intervention: 84 percent in cell-I, 63 percent in cell-II and 70 percent in cell-III.

Table 6.19: Average stock status of IUDs with the FWVs at the end of the month before and after intervention

[Figures in percentage]

Month of stock (MOS)	Method - I		Method - II		Method - III	
	Before	After	Before	After	Before	After
0-stock (Stock-out)	5.91	4.84	12.30	7.66	7.00	2.25
>0 - ≤1 (Potential stock-out)	2.15	1.61	5.16	4.50	11.30	6.76
>1 - ≤2 (Under stock)	4.30	2.69	11.11	11.71	12.90	10.36
>2 - ≤3 (Adequate stock)	9.14	6.45	11.50	13.06	14.50	10.36
3+ (Over stock)	78.49	84.41	59.92	63.06	54.30	70.27
N	**186**	**186**	**252**	**222**	**186**	**222**

Source: MIS form # 3

Note: Average stock status: Six months' average before intervention July-December'94, and after intervention January-June'95

N = Total number of FWVs

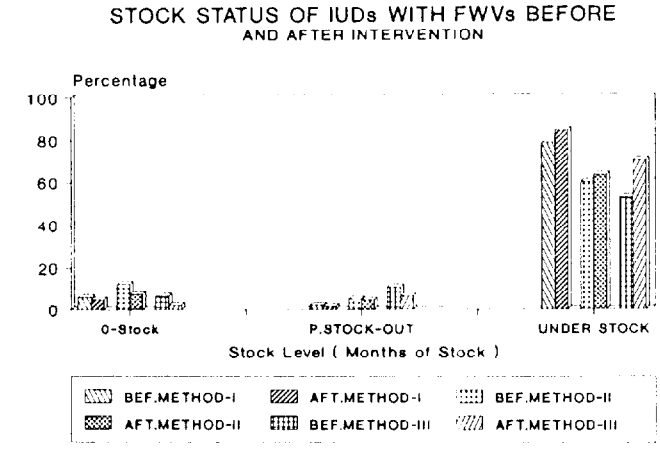


Fig.6.24

NOTE: SIX MONTHS' AVERAGE,BEF.:BEFORE INTERVENTION,AFT.:AFTER INTERVENTION

Trends of stock level of IUD with FWVs

The most important feature of the trend of IUD stock over the period of 12 months for all the methods was that a large majority of FWVs had more than 3 months stock at the end of each month. On the other hand, the stock-out levels were fairly high even after the intervention for method-I and method-II (Fig. 6.25, 6.26 and 6.27).

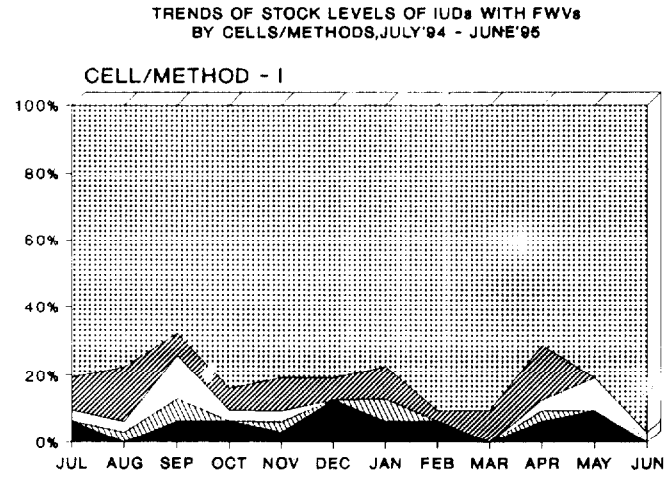


FIG.6.25

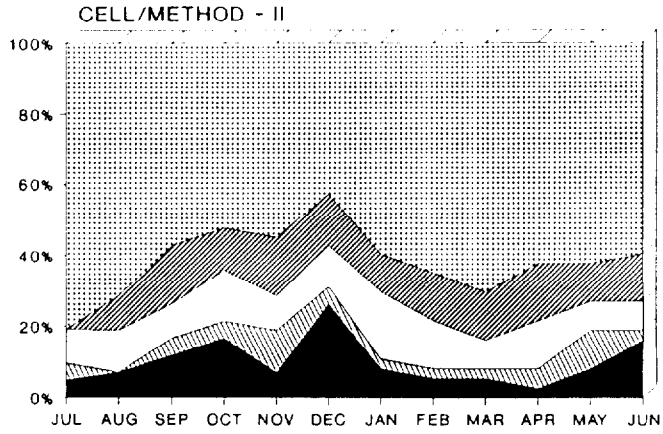


FIG.6.26

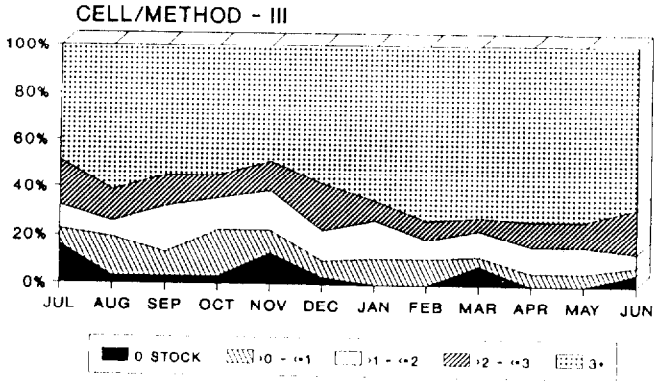


FIG.6.27
NOTE:JULY-DEC.PRE INTERVENTION PERIOD
JANU-JUNE POST INTERVENTION PERIOD

Injectables: A large proportion of FWVs were found have be potential stock-out before the intervention: 77 percent in cell-I, 64 percent in cell-II and 71 percent in cell-III. After the intervention, the proportion declined sharply to about 6 percent in cell-I, 4 percent in cell-II and 12 percent in cell-III. It may also be noted that while before the intervention, the over stock status was below 10 percent for any cell, it shot up to the level of 54 percent for method-I, 52 percent for method-II and 33 percent for method-III after the intervention (Table-6.20 and Fig. 6.28).

Table 6.20: Average stock status of injectables with the FWVs at the end of the month before and after intervention

[Figures in percentage]

Month of stock (MOS)	Method - I		Method - II		Method - III	
	Before	After	Before	After	Before	After
0-stock (Stock-out)	17.18	3.76	21.11	6.31	10.87	0.90
>0 - ≤1 (Potential stock-out)	77.30	5.91	63.74	3.60	71.19	12.16
>1 - ≤2 (Under stock)	0.61	12.37	3.19	12.61	5.98	27.03
>2 - ≤3 (Adequate stock)	2.23	23.66	1.99	25.68	2.17	27.03
3+ (Over stock)	3.68	54.30	9.96	51.80	9.78	32.88
N	**163**	**186**	**251**	**222**	**184**	**222**

Source: MIS form # 3

Note: Average stock status: Six months' average intervention July-December'94, and after intervention January-June'95

N = Total number of FWVs

STOCK STATUS OF INJECTABLES WITH FWVs
BEFORE AND AFTER INTERVENTION

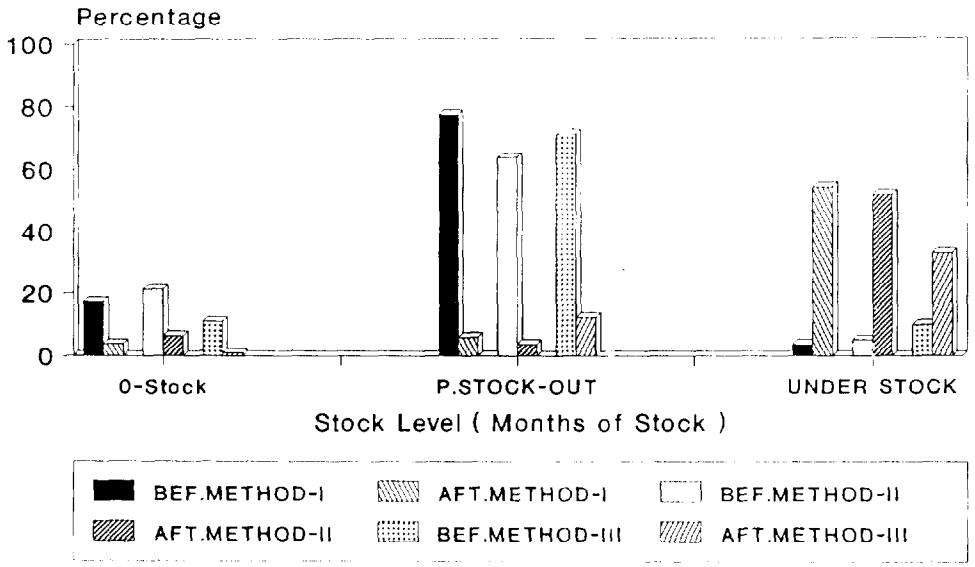


Fig.6.28
NOTE: SIX MONTHS' AVERAGE,BEF.:BEFORE INTERVENTION,AFT.:AFTER INTERVENTION

Trends of stock levels of injectables with FWVs

It is important to note that during the pre-intervention period over 80 percent of the FWAs in cell-I had potential stock-out of injectable contraceptive and almost all of the rest had stock-out. Surprisingly, from January'95 i.e. after the intervention, the percentage of potential stock-out went down to about 5 percent and the stock-out level also declined. Over stock level increased to a great extent.

The situation was similar for method-II and method-III. One important observation about these methods was that nearly all the FWVs had stock-out of injectable contraceptive in December'94

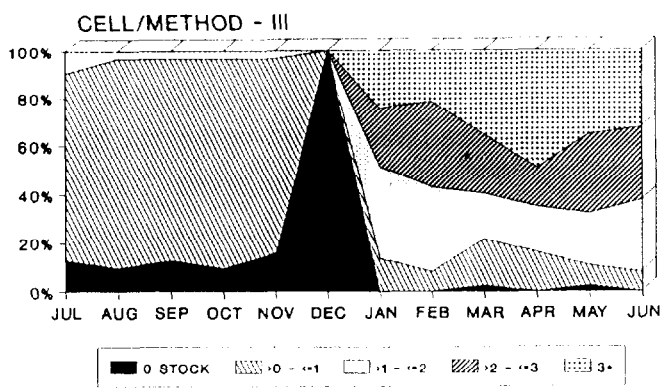


FIG.6.31
NOTE:JULY-DEC.PRE INTERVENTION PERIOD
JANU-JUNE POST INTERVENTION PERIOD

SECTION SEVEN

OBSERVATION STUDY

7.1. Introduction

In order to record the process and management of monthly distribution of contraceptives at the thana FP offices to the FWAs and FWVs, observations were made on the monthly distribution days for a period of six months in 12 thanas -- 6 in Chittagong and 6 in Rangpur district. The thanas were selected in equal numbers from relatively accessible and inaccessible thanas.

7.2. Methodology

A team of two persons visited each sample thana on the monthly distribution day(s) and recorded their observations independently. Thus, 12 teams were deployed each month to the 12 sample thanas to make observations. Such observations were done over a period of six months. The teams were interchanged from time to time. In a few thanas there were more than one distribution day in a month and observations were made on all the distribution days (Appendix-E).

A check-list (Appendix-C) was developed for making the observations. Both the observers assigned to a thana noted their observations independently and later compared to see whether there was any inconsistency in their observations and made necessary modifications/changes/corrections, if needed. After completion of the observations, a write-up on the observations was prepared outside the thana store right on the day of observation. When required, points were noted while making observations.

A quality control team was deployed to assess the quality of the observations. The team members randomly visited the study thanas on the distribution days and examined the procedure of observations made by the observers to find out whether any bias was introduced in the observation because of the approaches of the observers. Later, they reviewed the notes of the observers to assess the quality of the recorded observations, that is whether any important event was overlooked or any aspect was over emphasized. The deficiencies in observations were discussed with the observers in order to avoid repetition of similar mistakes in future.

7.3. Findings

7.3.1. Receipt of Monthly Reports

From FPIs: In the well communicated thanas all the FPIs submitted the monthly reports to the thanas within the scheduled date during the 6-month period of observation. But in some badly communicated thanas, some of the FPIs were found to be late in submission of the monthly report.

During the first visit it was observed that reports from 4 FPIs in Kutubdia (method I) did not reach the thana office and one FPI in the same thana submitted the report on the distribution day. During the second visit, it was found that 5 FPIs in Rowmari (method II) and one FPI in Sandwip (method III) had submitted report on the distribution day. Report from one FPI in Fulchari thana (method I) did not reach the thana as observed during the second visit. It was found in the sixth visit that one FPI in Rowmari and one FPI in Moheshkhali submitted the report on the distribution day. In the remaining cases the reports of FPIs were found to have reached in time. The delay occurred reportedly due to long distance and bad communication.

From FWVs: In the well communicated thanas, reports from one FWV from Gangachara (method I) and one FWV from Rauzan (method II) were not received during the first and second visits respectively. The FWV in Gangachara was on leave and the FWV in Rauzan reported that she had submitted the report to the storekeeper but the latter denied to have received it. On the third visit one FWV from Rauzan was found submitting the report on the distribution day.

In case of badly communicated thanas, on different visits 5 FWVs from Rowmari thana were found to have submitted the monthly report on the distribution day. They reported that the thana office was very far and so they had brought the report on the distribution day. In other visits all the FWVs were found to have sent the reports in time.

7.3.2. Approval for Distribution of Contraceptives

It was observed that in the majority cases the quantity of contraceptive commodities distributed to the FWAs and FWVs each month had the approval of TFPOs. But in about 13 percent observations the storekeepers had distributed the contraceptive without approval of the TFPOs. This happened mainly because of absence/preoccupation of TFPOs.

7.3.3. Adherence to the Assigned Methods of Distribution

Rowmari was assigned to follow method II but the thana office did not follow the method in any month throughout the study period. They promised each time that they would follow the method from the following month but it was never done. Moheshkhali also did not follow the method (method II) in the first month but it was followed from the second month. Excepting these two situations, the experimental methods were followed by all the study thanas.

7.3.4. Preparation and Approval of Indent Vouchers (IVs)

A big difference was observed in case of preparation and approval of IVs among the most accessible and least accessible thanas. In 78 percent observations in the most accessible thanas, it was found that the issue vouchers were made ready by the storekeepers before the distribution and those were also approved by the TFPOs. In case of least accessible thanas it was found only in 49 percent of the observations (see table-7.1). In 30 percent of the observations in the least accessible thanas, it was found that the storekeepers prepared the IVs before the distribution but those could not be approved by the TFPOs because of their absence from the office or other preoccupations. In many of these cases, the storekeeper prepared the IVs hurriedly on the distribution days.

It was found in some observations in certain thanas including two most accessible (Rauzan and Pirgacha) and 4 least accessible thanas (Fulchari, Kutubdia, Rowmari and Sandwip), that the issue vouchers were not prepared before distribution and these were done during distribution of the contraceptives. Gross deviations from the standard procedures of distribution of contraceptives were noted in two observations in Rowmari thana. In one observation it was found that the quantity of contraceptives was not recorded in the issue voucher and signature of FWAs and FWVs were obtained on blank IVs. Furthermore, the storekeeper had put the quantities of commodities on the IVs arbitrarily and when those were placed for approval of TFPO he also made changes in the quantities arbitrarily.

Table 7.1: Information about preparation and approval of indent vouchers (IVs) by most accessible and least accessible thanas

[Figures in percentage]

Information	Most accessible thanas	Least accessible thanas
IVs were prepared and approved by TFPOs before the distribution	75	49
IVs were prepared but were not approved by TFPO before distribution	14	30
IVs were prepared during distribution of the commodities	11	15
Quantity of contraceptive given to the FWAs/FWVs was not recorded in the issue vouchers and signatures of FWAs/FWVs were taken on blank IVs	-	3
Storekeeper had put quantities on IVs arbitrarily and the TFPO while approving changed the quantities also arbitrarily	-	3
Total: (%)	100	100
(N)	(N=36)	(N=33)*

* 3 observations were missed because the distributions were made before the schedule date.

7.3.5. Storage Condition

In the first visit 78 percent of the thana stores were found to be disorganized and this was so found in 50 percent thanas in the last observation. Certain thana stores were found to be disorganized across all the observations. These thanas were:

Most accessible thanas	Least accessible thanas
Rauzan	Rowmari
Pirgonj	Moheshkhali
Pirgacha	Kutubdia

Only the thana store in Fulchari was found to be well organized and neat and clean in all the observations, but the building was found not to be in a good condition. The conditions of the store buildings was not also safe in Boalkhali and Sandwip. Rajibpur thana did not have any store room and the commodities were kept in the office room haphazardly.

7.3.6. Time of Beginning the Distribution

It was found in 30 percent observations in most accessible thanas and 40 percent observations in least accessible thanas that contraceptive distribution began between 10:00 a.m. and 12:00 noon. In around one-third of the observations, the distribution of contraceptives was found to begin after 2:00 p.m.

Table 7.2: Time of beginning the distribution

[Figures in percentage]

Time of beginning	Most accessible thana (N=36)	Least accessible thanas (N=33)
10:00 a.m. to 12:00 noon	30	40
12:00 noon to 2:00 p.m.	36	26
2:00 p.m. to 4:00 p.m.	28	31
After 4:00 p.m.	6	3
Total (%)	100.0	100.0

7.3.7. Time of Closing the Distribution

In the majority of observations in the least accessible thanas (72%) and most accessible thanas (66%), the distribution of contraceptives was completed within 5:00 p.m. In over a quarter of observations in the most accessible thanas, distribution of contraceptives continued even after 5:00 p.m. compared to 11 percent in the least accessible thanas.

Table 7.3: Time of closing of distribution

[Figures in percentage]

Time of closing	Most accessible thanas (N=36)	Least accessible thanas (N=33)
2: 00 p.m.	14	6
Between 2:00 p.m. to 3:00 p.m.	11	23
" 3:00 p.m. to 4:00 p.m.	25	37
" 4:00 p.m. to 5:00 p.m.	22	23
After 5:00 p.m.	28	11
Total (%)	100.0	100.0

7.3.8. Peak Time of Distribution

It was found in majority observations (60%) in the most accessible thanas that there was no peak time for distribution of contraceptives (Table-7.4). On the contrary, in the majority of the observations (65%) in the least accessible thanas it was found that there were peak times for distribution. In the most accessible thanas, the peak hours of distribution of contraceptives were found to concentrate between 12:00 and 2:00 p.m. while in case of least accessible thanas it was between 1:00 p.m. and 3:00 p.m.

Table 7.4: Peak time of distribution

[Figures in percentage]

Peak time	Most accessible thana (N=36)	Least accessible thanas (N=33)
No peak time	60	40
11:00 a.m. to 12:00 noon	4	9
12:00 noon to 1:00 p.m.	12	9
1:00 p.m. to 2:00 p.m.	12	18
2:00 p.m. to 3:00 p.m.	8	20
3:00 p.m. to 4:00 p.m.	4	4
Total (%)	100	100

7.3.9. Distributors of Contraceptives

It was observed that among the 12 study thanas, the storekeepers were in place of 5 thanas only. In the remaining 7 thanas the position was lying vacant and the responsibilities of the storekeepers were being performed either by TFPA, accountant, FPI or typist. In Kutubdia one of the FPIs of the Sadar thana performed the job of storekeeper in addition to his normal duties. Vacancy for the position of storekeeper was not found to relate to the accessibility of thanas. The following table provides detailed information in this regard.

Name of thana	Status of thana	Contraceptive distributed by
Rauzan	Most accessible	Storekeeper
Fulchari	Least accessible	-do-
Rajibpur	-do-	-do-
Rowmari	-do-	-do-
Pirgacha	Most accessible	-do-
Sandwip	Least accessible	TFPA
Boalkhali	-do-	-do-
Gangachara	Most accessible	-do-
Sitakunda	-do-	Accountant
Pirgacha	-do-	-do-
Kutubdia	Least accessible	FPI
Moheshkhali	-do-	Typist

7.3.10. Supervision During Distribution

Among the six observations made in the 12 thanas, in 1 to 3 observations in 7 thanas, the TFPOs/ATFPOs were found to make supervisory visits to the stores during the distribution of contraceptives. The TFPO/ATFPO of Rauzan thana was found to make supervisory visit to the store in three of the visits and in other thanas it was found in one or two observations only. These thanas are Boalkhali, Fulchari, Sandwip, Gangachara, Pirgonj and Kutubdia. In the remaining 5 thanas, no one made any supervisory visit to the stores during the observation days.

7.3.11. Receipt of Issue Voucher by FWAs/FWVs

It was observed in two-thirds of the thanas that a copy of the issue voucher signed by the TFPO was supplied to the FWAs/FWVs along with the supplies of contraceptives. In Rowmari and Rajibpur the issue vouchers were found to have been given on the next distribution day. In these thanas, the TFPOs signed the issue vouchers after distribution. The storekeepers said that the TFPOs were not available to sign the vouchers before the distribution. It was found in some thanas that all the issue vouchers were not signed by TFPOs and those which were not signed were given in the next distribution day after obtaining TFPO's signature. This happened because the storekeepers could not make all the vouchers ready in time to obtain the signature of TFPOs.

It was found in Rowmari that the signatures of FWAs/FWVs were obtained on blank issue vouchers. There was no TFPO in position in Rajibpur thana. The TFPO in Rowmari was in-charge of TFPO of Rajibpur.

7.3.12. Carrying of Contraceptives

The contraceptives were found to be carried by the FWAs/FWVs mostly in polythene bags. Vanity bags, jute bags and cartons were also used frequently. In a few visits it was also observed that the contraceptives were carried in plastic bags, cotton bags and wrapping them in towels. In some observations in some thanas, namely Rajibpur, Pirgonj and Sandwip it was observed that some FWAs/FWVs asked for bags for carrying the contraceptives. They said that FP offices should supply them bags for carrying contraceptives. In some cases, it was observed that the FWAs/FWVs had difficulty in carrying the contraceptives because of insufficient carriers.

7.3.13. Interaction of FWAs/FWVs with the Storekeepers

On many occasions during the distribution of contraceptives, the FWAs/FWVs made some queries to the storekeepers. In particular, in some visits it was found that the FWAs/FWVs enquired why condoms were not supplied as per their requirements. The storekeepers said that they did not get adequate supply from the DRS. The thanas where shortage/stock-out occurred are mentioned below with the visit number.

Thana	Visit number
Sitakunda	3rd visit
Rauzan	2nd & 4th visit
Sandwip	3rd & 4th visit
Pirgonj	2nd visit
Rowmari	1st & 6th visit
Gangachara	5th visit
Moheshkhali	6th visit
Rajibpur	6th visit

In Gangachara, an FWA complained during the first visit that she had no condom on hand and no condom was supplied to her in the current month. On the other hand an FWA was given double the calculated amount of oral pills. In this regard the storekeeper said that he had made mistakes in transferring the figure from the calculation sheet to the issue voucher.

During the 4th visit in Pirgacha, there were some discrepancies between contraceptive demand placed by the FWAs and quantity of contraceptives supplied to them. The FWAs enquired about this. The storekeeper said that their (FWAs) demand calculations were wrong.

There are 100/120 pcs. of condom in a box of condom and 30 cycles of pill in a box of pills. Usually, the supplies to the FWAs/FWVs were given in full boxes. Because of rounding, in some cases quantities supplied differed from the demand/calculated quantities. The concerned FWAs/FWVs wanted to know the cause of these variations.

7.3.14. Receipt of Contraceptive Supplies by FWAs & FWVs

It was found during observation period of six months that on average 75 percent of the FWAs and FWVs had received monthly supply of contraceptives (Table-7.5). In the thanas where experimental method-I was applied the average percentage of FWAs and FWVs receiving monthly supplies of contraceptives was higher than that of FWAs and FWVs receiving the monthly supplies in the thanas where experimental methods-II and III were applied.

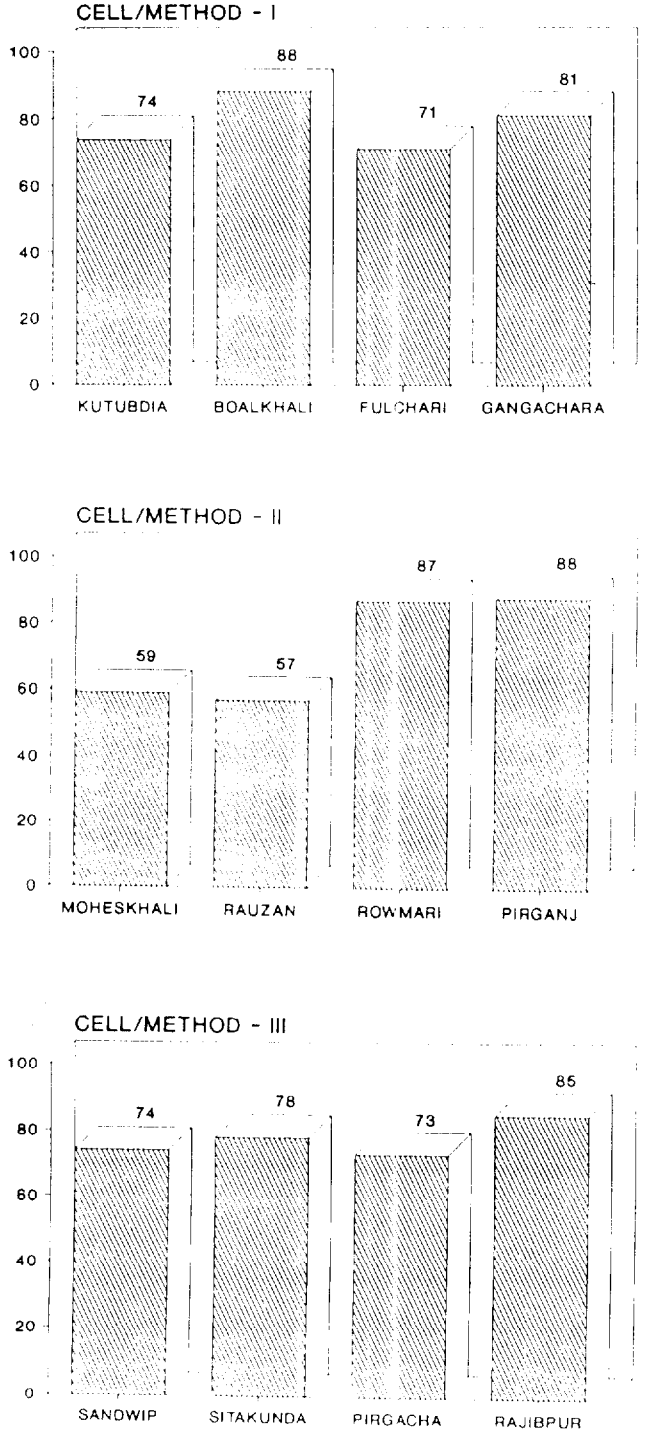
Table 7.5: Average percentage of FWAs and FWVs who received monthly supply of contraceptives by the three categories of experimental thanas

Experimental method	FWA (%)	FWV (%)	Total (%)
Method I	79	78	78
Method II	73	71	72
Method III	74	76	75
Total	75	75	75

The average percentage of FWAs receiving monthly supplies of contraceptives over the period of six months was almost the same for method-II (73%) and method-III (74%), but for FWVs it was 5 percentage points higher for method-III than method-II.

Figure-1 demonstrates the average percentage of FWAs and FWVs receiving monthly contraceptives over the observation period according to the individual thana.

Figure 7.1: Average percentage of FWAs and FWVs (combined) receiving monthly supplies of contraceptives



It was found that on average only one-third of the FWAs and FWVs in Moheshkhali received contraceptive supplies during the field study period. In the first visit to this thana it was observed that most of the FWAs and FWVs were not given salary as well as contraceptives because they did not supply the contraceptive distribution figures for the last 12 months which were required by the storekeeper to calculate the contraceptive demand for individual FWAs/FWVs to follow method II of the study. In fact, these information were available with the storekeeper in MIS Forms 2 and 3 supplied by FWAs and FWVs in the past 12 months. In the second visit majority of the FWAs and FWVs returned homes early when they learnt that their salary would not be given on that day and they did not want to receive contraceptive supplies. In the third visit there was hardly any distribution of contraceptives because of shortage of supplies.

Some deviations from the normal procedures as well as some irregularities in the distribution of contraceptives were observed in some selected thanas including Moheshkhali. They were as follows:

- Signatures of FWAs/FWVs were obtained on issue vouchers by the storekeeper before the distribution of contraceptives and copies were distributed to them. Supplies were received by the FWAs/FWVs on production of issue vouchers, but in many cases it was found that the workers returned home without taking supplies. They returned or sent someone later to obtain the supplies.

- Contraceptive supplies were not given as per individual demand and the quantity was chosen arbitrarily. It happened particularly in two situations. If there was inadequate supply of contraceptives than required, less quantity was given and if there was over supply more than the required quantities were supplied.

- Signatures of FWAs/FWVs were obtained on the issue vouchers but supply was not given to them.

SECTION EIGHT

DISCUSSION AND RECOMMENDATIONS

The purpose of this study is two-fold: to provide a picture of the contraceptive logistics system at the peripheral level and to identify a system of contraceptive distribution so as to reduce the stock-out of contraceptive with the grass-root level workers (i.e. FWAs and FWVs).

This study, particularly the observations at the experimental thanas during the monthly distribution days over the period of six months, has provided a wide range of information about the logistics management system at the thana level, process and timing of receiving monthly reports from the peripheral level, process and management of the monthly contraceptive distribution, supervision of distribution, storage facilities and management of stores, timing of distribution of contraceptives and an overall scenario of the monthly distribution of contraceptives to the FWAs/FWVs.

It was observed that overall the distribution system of contraceptives to the FWAs and FWVs at the thana level went smoothly but certain problems and constraints were noticed. Such problems/constraints have been mentioned in details in the main report and those mainly include the following:

- Some thanas did not have any store and where available in many cases the space was not adequate to store the contraceptive commodities and other products.

- Some of the stores were found to require renovations immediately.

- It was observed by the research team during field supervision that some stores were found to hold damaged/time expired

commodities for several years which should be removed immediately for making better use of the space in the store.

- In several thanas the positions of storekeeper were lying vacant which caused mismanagement/delay/indiscipline in the distribution system.

- About a half of the FWAs did not have trunk or other storage facilities of the contraceptives leading to damage or loss of contraceptives.

- As no standard bag/carrier was supplied to the FWAs and FWVs, majority of them faced difficulty in carrying the contraceptives to their homes.

- Overall 70 to 88 percent of FWAs and FWVs received contraceptive supplies on the monthly distribution days. In two particular thanas it was only 58 percent.

In this context, the FWAs and FWVs, particularly from the remote areas stated that it was difficult for them to come to thana each month to take supplies or for other purposes. They were inclined to take the supplies from the FWCs.

The above-mentioned problems/constraints are management and policy issues and should draw the attention of the DFP to take necessary measures/actions to improve the logistics management system at the peripheral level.

The second purpose, in fact the main purpose of this study was to identity a system of contraceptive distribution so as to minimize the stock-outs of contraceptives at the peripheral level. The current/existing system is 'pull' system wherein the FWAs/FWVs submit indents and accordingly contraceptives are supplied. This system has been in existence over the last two decades. Calculation of monthly demand of contraceptive of an FWA/FWV in the existing system is quite complex and hard to

remember and to follow, particularly by the less-literate FWAs. Although the program expects that there should be 2-3 months' stock with an FWA/FWV at any point of time, the present system of calculations of demand do not ensure that in all cases. For example, the existing system envisages demand calculation in three ways. One way of calculation is that "if closing balance of any commodity is more than twice of the distribution of previous month then demand will be nil". The FWAs/FWVs who have not been given supplies on a month following this procedure, in many cases (who had stock level for slightly more than two months) their stock level in most part of that month would be below two months and at the end of that month it can go below one month stock, which is a risky stock position. Another disadvantage with this procedure was that the storekeepers got little time to check the demand calculations made by the FWAs/FWVs, prepare the issue vouchers and maintain other formalities for monthly distribution, particularly in the places where distribution is made in the early part of first week of the month.

So the study introduced a 'pull' system whereby the storekeeper will make the demand calculation and large part of the calculation can be done quite ahead of time, which they could finalize quickly after receipt of the monthly distribution report from the FWAs/FWVs. The 'push' system basically would ensure minimum of three months supply to an FWA/FWV on receipt of monthly supply. This system has entailed two variants. The first one considers the distribution figure of an FWA/FWV for the month before the last month. For example, in demand calculation for an FWA/FWV for the month of March, her distribution figure for the month of January would be considered in replenishing her stock level. This is closer to the actual demand of an FWA for the month in which she receives supplies if we consider that an FWA covers her area in a period of two months. In other words, the area covered by the FWA in January, would be visited by her in March and thus the amount of supplies received in March would be closer to her actual requirement for that month.

The second variant takes the average monthly distribution figure for the past one year period, and this average monthly figure would be considered for her demand calculation in the following 12 months period. To be more specific, say an FWA on average distributed 500 cycles of oral pill during the calendar year 1994. Exactly this amount would be considered in her demand calculation throughout the calendar year of 1995. The prime advantage with this method is that the storekeeper could make major part of the demand calculation at the beginning of the year. There are two major difficulties/problems/uncertainties with this variant or method of calculation. If a storekeeper makes a mistake in calculating the average demand for the past 12 months for an FWA/FWV, this will affect the demand calculation for that particular FWA/FWV throughout the following 12 months period. In the absence of any supervision of such average demand calculation changes of such error can not be ignored and would lead to imbalances in the stock of the concerned FWAs/FWVs. Furthermore, with the increase of CPR, potential acceptors and change in the emphasis of method mix in the following year and the level of availability of any specific method of contraceptives, use of past 12 months average may not be appropriate in calculating the demand of any specific method of contraceptive and thereby may lead to imbalances in stock situation.

In fact, theoretically method-I for demand calculation seems to be more reasonable as compared to the second method of the 'push' system as well as the existing 'pull' system. One can think of other variants of 'push' system for demand calculation. For example, last month's contraceptive distribution figure can be used in the demand calculation. It sounds similar to method-I of the 'push' system, but lacks two major benefits of this method (method-I). The first one is that the storekeeper will have to make the entire demand calculation after receipt of monthly reports leaving less time for preparation of IVs and maintaining other formalities like the existing system, particularly in the thanas where distribution is made in the

early part of first week of the month. Secondly, as it takes account of the last month distribution figure, the quantity replenished on a particular month following this method of calculation would be less likely to meet the requirement for the month on which an FWA would obtain the supply, which has been perceived as a benefit of method-I, considering the two monthly round of an FWA in her unit.

The first three methods have been tested in this study. We have been informed recently that the fourth method has been tested by JSI/FPLM, but we did not see any result of that study.

However, the analysis of stock level data for this study has revealed that the level of stock-out and potential stock-outs has declined for all the three methods, and it declined more sharply for method-I, followed by method-II. It was also noted that on several occasions method-II and method-III were competing with each other.

It is worth mentioning that TFPOs, ATFPOs, Sr. FWVs and storekeepers of the 8 thanas where the two 'push' methods were tested were given a one-day training on the procedure of calculation of monthly contraceptive requirements for FWAs/FWVs--separately for method-I in 4 thanas and for method-II in the remaining 4 thanas. The FWAs/FWVs in those 8 thanas were not trained because they were not involved in the calculation of demand and it was done by the storekeepers themselves. But in the 4 thanas where the existing system was followed, the thana officials as well as the FWAs and FWVs were given one-day orientation on the existing system of demand calculation, because the FWAs/FWVs make the demand calculation in the existing system. It may be noted that this one-day training/orientation was the only intervention in this study. Though for method-III the FWAs/FWVs were oriented only on the demand calculation, it is expected that they got morally upgraded for timely submission of monthly report, taking regular supply of contraceptives etc. which should contribute to improve the overall contraceptive

logistics system at the peripheral level where method-III i.e. the existing system was followed. Having this benefits even the existing system i.e. 'pull' system could not compete with the 'push' system of contraceptive delivery.

In fact, it was hypothesized that without changing the system, with some technical inputs like training would improve the stock imbalances, and particularly would reduce stock-outs. This hypothesis has become true, because after the training of the FWAs/FWVs and the concerned thana officials on the existing system, stock-out level of specific contraceptive methods has largely declined. However, without any moral boost up to FWAs/FWVs like the method-III, and only with training to the concerned thana officials the level of stock-outs and potential stock-outs was reduced very significantly through using 'push' system, particularly in the thanas where method-I of 'push' system was applied. It may be mentioned that in comparing the stock level status of contraceptives before and after the intervention, status for condom may be ignored or given least preference because there was scarcity of condom in the country during the study period. Though the condom stock-outs were influenced by its shortage of supply, even stock-outs of condom with FWAs/FWVs over the period occurred less frequently with method-I as compared to the other two methods. However, over stock of contraceptives was found to be more frequent with method-I as compared to the other two methods. Though this is also an imbalanced situation, this can be better tolerated than the high level of stock-out situations. It may be mentioned that though stock of more than three months has been considered as over-stock, detailed break up of this group showed that in most cases stock level was between 3 and 3.5 months, which reflects that too much of stock were not lying with the FWAs/FWVs.

In all considerations, method-I of 'push' system may be recommended to be introduced in supplying contraceptive commodities at the peripheral level.

In case the DFP decide not to introduce any new system of distribution of contraceptives at the peripheral level, an orientation on the existing system to the FWAs/FWVs and the concerned thana officials would be required to reduce the stock-outs and to improve the overall logistics distribution system at the peripheral level.

Appendix-A

FORM NO. 1

MONTHLY CONTRACEPTIVES REQUIREMENT CALCULATION SHEET FOR FAMILY WELFARE ASSISTANTS (FWAs)

[USED FOR CELL/METHOD-I]

Month: ____________________

Year: ____________________

Sl. No.	Name of FWA	Union	Unit	Method/Brand	Month Before Last Distribution	3 Months Requirement	Last Month Closing Balance	Quantity to be Issued	Quantity Actually Issued (Rounded Figure*)	Issue Voucher No. & Date
					A	B=3xA	C	D=(B-C)		
1	2	3	4	5	6	7	8	9	10	11
				Condom (pcs)						
				C-5 (cycle)						
				Condom (pcs)						
				C-5 (cycle)						
				Condom (pcs)						
				C-5 (cycle)						
				Condom (pcs)						
				C-5 (cycle)						
				Condom (pcs)						
				C-5 (cycle)						
				Condom (pcs)						
				C-5 (cycle)						
				Condom (pcs)						
				C-5 (cycle)						
TOTAL:				Condom (pcs)						
				C-5 (cycle)						

* Rounded Figure: Please follow the procedure mentioned in the manual.

Prepared by: Signature : ____________________
Name : ____________________
Designation : ____________________

Checked by: Signature : ____________________
Name : ____________________
Designation : ____________________

Approved by: Signature : ____________________
Name : ____________________
Designation : ____________________

FORM NO. 2

MONTHLY CONTRACEPTIVES REQUIREMENT CALCULATION SHEET FOR FAMILY WELFARE VISITORs (FWVs)
[USED FOR CELL/METHOD-I]

Month:_____
Year:_____

Sl. No.	Name of FWV	Union	Method/Brands	Month Before Last Distribution	3 Months Requirement	Last Month Closing Balance	Quantity to be Issued	Quantity Actually Issued (Rounded Figure*)	Issue Voucher No. & Date
				A	B=3xA	C	D=(B-C)		
1	2	3	4	5	6	7	8	9	10
			Condom (pcs)						
			C-5 (cycle)						
			Depo (doses)						
			Norist (ampule)						
			Copper-T (pcs)						
			Condom (pcs)						
			C-5 (cycle)						
			Depo (doses)						
			Norist (ampule)						
			Copper-T (pcs)						
TOTAL:			Condom (pcs)						
			C-5 (cycle)						
			Depo (doses)						
			Norist (ampule)						
			Copper-T (pcs)						

* Rounded Figure: Please follow the procedure mentioned in the manual.

Prepared by: Signature :_____ Name :_____ Designation :_____

Checked by: Signature :_____ Name :_____ Designation :_____

Approved by: Signature :_____ Name :_____ Designation :_____

Appendix-B

FORM NO.3

MONTHLY CONTRACEPTIVES REQUIREMENT CALCULATION SHEET FOR FAMILY WELFARE ASSISTANTS (FWAs)
[USE FOR CELL/METHOD-II]

Month:_________________
Year:__________________

Sl. No.	Name of FWA	Union	Unit No.	Method/Brands	Monthly Average Distribution	3 Months Requirement	Last Month Closing Balance	Quantity to be Issued	Quantity Actually Issued (Rounded Figure*)	Issue voucher No. & Date
					A	B=3xA	C	D=(B-C)		
1	2	3	4	5	6	7	8	9	10	11
				Condom (pcs)						
				C-5 (cycle)						
				Condom (pcs)						
				C-5 (cycle)						
				Condom (pcs)						
				C-5 (cycle)						
				Condom (pcs)						
				C-5 (cycle)						
				Condom (pcs)						
				C-5 (cycle)						
				Condom (pcs)						
				C-5 (cycle)						
				Condom (pcs)						
				C-5 (cycle)						
TOTAL:				Condom (pcs)						
				C-5 (cycle)						

* Rounded Figure: Please follow the procedure mentioned in the manual.

Prepared by: Signature :______________________
Name :______________________
Designation :______________________

Checked by: Signature :______________________
Name :______________________
Designation :______________________

Approved by: Signature :______________________
Name :______________________
Designation :______________________

FORM NO. 4

MONTHLY CONTRACEPTIVES REQUIREMENT CALCULATION SHEET FOR FAMILY WELFARE VISITORs (FWVs)
[USED FOR CELL/METHOD-II]

Month:_____
Year:_____

Sl. No.	Name of FWV	Union	Method/Brands	Monthly Average Distribution	3 Months Requirement	Last Month Closing Balance	Quantity to be Issued	Quantity Actually Issued (Rounded Figure*)	Issue Voucher No. & Date
				A	B=3xA	C	D=(B-C)		
1	2	3	4	5	6	7	8	9	10
			Condom (pcs)						
			C-5 (cycle)						
			Depo (doses)						
			Norist (ampule)						
			Copper-T (pcs)						
			Condom (pcs)						
			C-5 (cycle)						
			Depo (doses)						
			Norist (ampule)						
			Copper-T (pcs)						
TOTAL:			Condom (pcs)						
			C-5 (cycle)						
			Depo (doses)						
			Norist (ampule)						
			Copper-T (pcs)						

* Rounded Figure: Please follow the procedure mentioned in the manual.

Prepared by: Signature :_____ Name :_____ Designation :_____

Checked by Signature :_____ Name :_____ Designation :_____

Approved by: Signature :_____ Name :_____ Designation :_____

OBSERVATION GUIDELINE/CHECKLIST

PART-A

(Before the Distribution)

1. Whether the storekeeper has received Forms (Form # 2 and 3) from all FPIs and FWVs for the last month and when received. If not received from all, to what extent received? Reasons for the delay.

2. Whether quantity of contraceptive to be distributed to the FWAs/FWVs has been properly checked and approved by TFPOs/ATFPOs/Sr. FWVs/MO-MCH.

3. Whether issue vouchers for individual FWAs/FWVs were made ready before the distribution time i.e. quantity to be distributed and approved by TFPO. When were the issue vouchers made ready and when were the approved by the TFPO? If these have not been done in time, try to investigate the reason.

4. Observation on store organization: Are the commodities in the store well arranged? Provide information supporting your observation.

PART-B

(During Distribution)

1. Describe the distribution timing: when started? any break? when finished? what was the peak time for distribution? Was the time for distribution adequate? Was the distribution done on time and the distribution process was affected because of shortage of time? Describe such situation if it occurs.

2. Who distributed the contraceptives? If not storekeeper, provide reason.

3. Whether anybody assisted in the distribution and if assisted who? If not assisted, was any assistance required? Provide information supporting your observation.

4. Whether any deviation was made from indented amount (under pull system) or calculated amount (under push system). Reasons for deviations.

5. Whether the FWAs/FWVs signed the issue voucher or whether any copy of issue voucher has been provided to FWAs/FWVs. Describe the situation. Also record the variations, if any.

6. How the commodities were carried by the FWAs/FWVs? Any difficulty in carrying commodities?

7. Was there any supervision made by any officer during the distribution, if yes by whom and what kind of supervision was made?

8. Interaction between the storekeeper (distributor) and recipients (FWAs/FWVs): Kind of discussion they made while providing commodities to the individual FWAs/FWVs; any queries by the FWA/FWV; and treatment of storekeeper with the FWAs/ FWVs.

9. Any indiscipline observed during the distribution? If any, describe.

10. Any comments/remarks made by the FWAs/FWVs when they came to receive contraceptives from store. If any; please note down those comments/remarks.

11. Any other observation regarding the distribution.

PART-C

[After the Distribution]

1. How many FWAs/FWVs received the contraceptives during the day? **[ask the storekeeper]**

2. Collect the copies of the following from the storekeeper.

    1) MIS Form-2 submitted by FPIs (for all thanas)

    2) MIS Form-3 submitted by FWVs (for all thanas)

    3) Demand calculation Form-1 & 2 (for method-1 thanas)

    4) Demand calculation Form-3, 4, 5 & 6 (for method-2 thanas)

3. If you feel that distribution could be done in a better way, please describe how.

INSTRUMENT FOR INTERIM STOCK LEVEL SURVEY

[USED FOR FWA/FWV]

Date and time of observation		
Date		
Time	Start	
	End	

		CODE #
NAME OF FWV		
NAME OF UNION		
NAME OF THANA		
NAME OF DISTRICT		
DRS AREA		
EXPERIMENTAL CELL		
COMMUNICATION STATUS		

	DATA COLLECTED BY	CHECKED BY
Name		
Signature		
Date		

A. STOCK LEVEL DATA COLLECTION FORM

Methods	Previous two months' distribution		Month's opening balance	Contraceptive received during the month	Date of receipt	ICR/FWV register balance on the date of visit (usable only)	Physical balance on the date of visit (usable only)	Diff. * (7-8) (Excess or short)	Reasons for excess/short	FO: Compare the physical balance with month before last distribution (Col. 2)	
	Month before last	Last month								Is physical balance less than month before last distribution? Yes = 1 No = 2	Is physical balance 3 times more of month before last distribution? Yes = 1 No = 2
1	2	3	4	5	6	7	8	9	10	11	12
Condom (pcs)											
C-5 (cycle)											
IUDs (pcs)											
Injectables (doses)											

* Put ( ) in indicating shortage.

B. OPINIONS OF FWV REGARDING STOCK STATUS AND PRESENT SYSTEM OF DISTRIBUTION

[FIELD OFFICER (FO): AFTER COMPLETION OF PHYSICAL COUNT ASK THE FOLLOWING QUESTIONS]

Q #1. How many months' stock should you have usually with you?

[FO: Carefully review the stock level data collection form. I FWV's physical balance for any commodity (oral pills condoms/IUDs/injectables) is less than the distribution of mont before last then ask Q.#2]

Q #2. You have stock of oral pills/condoms/IUDs/injectables of less tha one month demand, why do you have so low level of stock?

Pill (probe):
Condom (probe):
IUDs (probe):
Injectables (probe):

[FO: Carefully review the stock level data collection form. I FWV's physical balance for any commodity (oral pills/ condoms/IUDs injectables) is three times more than that of month before las distribution then ask Q.#3]

Q #3. You have stock of oral pills/condoms/IUDs/injectables more tha three months demand, why do you have so high level of stock?

Pill (probe):
Condom (probe):
IUDs (probe):
Injectables (probe):

Q #4. **[Not applicable for existing system].** Previously you used to ge contraceptive supplies through indent system and now you are gettin supplies with the new system. How do you feel about the new syste (probe)?

Q #5. **(For existing system only)** You have received the training on how th indent for contraceptives should be given. Do you think you wer benefitted from this training? If yes (probe) how? If not (probe why?

Q #6. Please tell us if you have anything about the distribution syste of contraceptive?

Observation #1. FO: Observe the record keeping status of the FWVs an note down your observations in detail (up-dated, not up dated, satisfactory, dissatisfactory etc.)

Observation #2. FO: Observe the storing status of the contraceptives an note down your observations in detail (where stored, ho stored etc.)

Observation #3. FWV sits at FWC or HC or others?

Family Welfare Center (FWC)	1
Hired Clinic (HC)	2
Others (specify)_____	

[THANK YOU FOR YOUR COOPERATION]

Appendix-E

Contraceptive Distribution Dates (scheduled and actual) in Different Months by Thanas

Cell #	Name of Thana	January		February		March		April		May		June	
		Scheduled	Actual	Scheduled	Actual	Scheduled	Actual	Scheduled	Actual	Scheduled	Actual	Scheduled	Actual
I	1. Fulchari	5th day **Refixed 2nd day**	2nd day	4th day **Refixed 5th day**	5th day	11th day	11th day	4th day	4th day	6th day	6th day	3rd day **Refixed 4th day**	4th day
	2. Gangachara	5th day	5th day	4th day	4th day	18th day	18th day	5th day **Refixed 20th day**	20th day	6th day	6th day	5th day	5th day
	3. Kutubdia	3rd day	3rd day	4th day	4th day	12th day	12th day	3rd day	3rd day	3rd day **Refixed 4th day**	4th day	3rd day	3rd day
	4. Boalkhali	10th day	10th day	4th day **Refixed 11th day**	11th day	11th day	11th day	10th	10th day	8th day	8th day	10th day **Refixed 14th day**	14th day
II	1. Rowmari	3rd day	3rd day	3rd day **Refixed 4th day**	4th day	8th day	8th day	3rd day	3rd day	3rd day	3rd day	3rd day	3rd day
	2. Pirganj	4th day	4th day	4th day **Refixed 11th day**	11th day	7th day **Refixed 11th day**	11th day	5th day	5th day	6th day	6th day	5th day	5th day
	3. Moheshkhali	5th day	5th day	5th day	5th day	8th day	8th day	5th day	5th day	6th day	6th day	5th day	5th day
	4. Rawzan	10th day	10th day	11th day **Refixed 14th day**	14th day	11th day	11th day	10th day	10th day	16th day	16th day	10th day **Refixed 6th day**	6th day
III	1. Sandwip	3rd, 4th & 5th day **Refixed 2nd, 3rd & 4th day**	2nd, 3rd & 4th day	2nd, 3rd & 4th day	2nd, 3rd & 4th day	14th, 15th & 16th day	14th, 15th & 16th day	2nd, 3rd & 4th day	2nd, 3rd & 4th day	2nd, 3rd & 4th day	2nd, 3rd & 4th day	3rd, 4th & 5th day	3rd, 4th & 5th day
	2. Sitakunda	14th & 16th day **Refixed 21st day**	21st day	15th & 16th day	15th & 16th day	15th & 16th day	15th & 16th day	15th & 16th day	15th & 16th day	15th & 16th day	15th & 16th day	15th & 17th day	15th & 17th day
	3. Rajibpur	4th day	4th day	4th day	4th day	11th day **Refixed Feb. 25th day**	**Feb. 25th day**	4th day	4th day	4th day	4th day	4th day	4th day