

**Memorandum**

Date April 22, 1987

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Subject Foreign Trip Report (AID/RSSA): Nepal--Logistics Assistance, March 9-21, 1987

To James O. Mason, M.D., Dr.P.H.
Director, CDC
Through: Assistant Director for Science, CHPE

SUMMARY

- I. PLACES, DATES, AND PURPOSE OF TRAVEL
 - II. PRINCIPAL CONTACTS
 - III. BACKGROUND
 - IV. FINDINGS AND RECOMMENDATIONS
- TABLES 1-3
FIGURES

SUMMARY

Although it was initially proposed that the writers travel to Nepal to complete AID's Contraceptive Procurement Tables (CPTs), USAID/Nepal expanded the scope of work to explore means to improve the data used to compile the CPTs.

We found that a new reporting system has been designed by the Family Planning/Maternal-Child Health (FP/MCH) Project. The system will rely on couriers to transmit reports on a monthly basis. We proposed that the system be fieldtested in a small number of districts before countrywide implementation and that it be expanded to include the Integrated Community Health Services Development Project.

To strengthen the logistics system, we recommended that USAID finance the refurbishing of a project vehicle, since there is a Nepal Government freeze on importing vehicles not included in project agreements.

Based on service statistics and contraceptive prevalence survey data, the CPT forecasts were made for contraceptive methods supplied by AID. An increase in the use of reversible methods, especially pills and condoms, is anticipated because of increased program emphasis on these methods compared to sterilization. The CPTs were sent to AID/W after our return.

I. PLACES DATES AND PURPOSE OF TRAVEL

At the request of USAID/Nepal and AID/S&T/POP/FPSD, Jay Friedman and Howard Springsteen of John Snow Inc. (JSI) visited Nepal March 9-21 to provide assistance to USAID/Kathmandu on contraceptive logistics management. This travel was in accordance with the Resources Support Service Agreement (RSSA) between AID and CDC/CHPE/DRH, and was made in conjunction with a trip to Pakistan.

II. PRINCIPAL CONTACTS

A. USAID/Kathmandu

1. Joseph L. Anderson, Health Officer
2. Barbara Spaid, Family Planning Officer
3. David Piet, Family Planning Officer
4. David Calder, Health, Population, Nutrition Officer
5. Pangdey Yanzone, Population Assistant

B. Family Planning/Maternal-Child Health (FP/MCH Project)

1. Dr. T. R. Khatri, Project Chief
2. Ganesh Man Shrestha, Chief, Supply and Procurement Section
3. Ramesh Bhatta, Maternal-Child Health Section
4. Surja Bahadur Singh, Supply Officer
5. Dr. Gorkana Regmi, Chief Evaluation Section

C. Integrated Community Health Services Development Project (ICHSDP)

1. Dr. Benu Bahadur Karki, Deputy Chief
2. Hira Lal Rajbhansi, Section Chief, Family Planning

D. JSI - Nepal

1. Eileen McGinn, Family Planning Specialist
2. Pat Taylor, Management and Logistics Advisor

III. BACKGROUND

A. Previous visit to Nepal

In January 1986, Jay Friedman and Timothy Johnson, DRH/CDC, assessed the contraceptive logistics systems of the major family planning providers in Nepal. At that time, USAID/Nepal was not receiving timely and accurate information on contraceptive distribution and stock levels from the Ministry of Health and non-governmental (NGO) providers which resulted in inaccurate forecasting of future contraceptive commodity requirements. Friedman and Johnson found that information on stocks levels and distribution existed at the central levels of both the Family Planning/Maternal-Child Health (FP/MCH) and ICHSDP projects, but that these data were not regularly reported to the Mission. Recommendations were made to resolve this problem and to strengthen the logistics system in anticipation of increased use of temporary methods. (See CDC Foreign Trip Report Nepal, dated March 11, 1986, which also contains a detailed description of the contraceptive logistics system in Nepal).

B. Scope of Work

In December of 1986, the Office of Population, AID/W, proposed that Friedman and Springsteen visit Nepal in March 1987 to assist in preparing the FY 1989 Contraceptive Procurement Tables (CPTs). USAID/Nepal replied in January 1987 that the necessary data for preparing the CPTs was already available and that a visit to merely complete the tables was not necessary, but that technical assistance to improve the data used to compile the CPTs would be important to USAID/Nepal. Therefore, as quoted below from the Mission's cable, an expanded scope of work was proposed to address the following issues:

- "1. How can the flow of information on contraceptive use and stock levels from the districts through regional headquarters to the central level be speeded up? How can reporting procedures be simplified?

2. How should the receipt (or nonreceipt) and completeness of reporting be monitored at the central level? By whom?
3. What actions (including sanctions) should be taken when reports are not received? By Whom?
4. How should data in the reports be used? By whom? How should reports be used to generate estimates of future requirements?
5. How can the accuracy/reliability of reports be routinely assessed?
6. What organizational changes within FP/MCH and ICHSDP are required to improve reporting and monitoring? What job descriptions have to be changed?
7. What kind of training is necessary to improve reporting? Who should be trained? Who should do the training? When?
8. What specific data should be provided to USAID regarding contraceptive monitoring and forecasting? By whom? When?
9. What specific activities should USAID monitor to assess MOH progress in implementing the reporting and monitoring system?
10. What additional CDC/JSI technical assistance would be useful in implementing the system?"

IV. OBSERVATIONS

After our arrival in Nepal, we met with Mr. Jay Anderson, Health Officer/USAID, to further define our scope of work and to identify resources USAID would be willing to commit to improving the data system. During this meeting, Mr. Anderson provided us with data on contraceptive stocks and distribution which had been gathered in the field by USAID staff over the past several months.

We then met with officials of the FP/MCH and ICHSDP projects on a number of occasions. Mr. Ramesh Bhatta of the FP/MCH project outlined details of a proposed new reporting and courier system designed to improve both the flow and quality of specific statistical information. The proposed system would address many, if not most, of the concerns raised by the Mission.

In order to familiarize all concerned FP/MCH officials with the proposed system, we organized a meeting of Messrs. Ganesh Man Shrestha, Gorkana Regmi, and Ramesh Bhatta of the Supply, Evaluation and MCH sections, respectively, of the FP/MCH project. We also met with Mr. Hira Lal Rajbhansi of ICHSDP to suggest that his project consider establishing a similar courier system or, more practically, participate in the FP/MCH system, which he agreed to consider.

We did not meet with officials of the social marketing project, since their sales figures and projections are considered to be of high quality by USAID. Similarly, we did not meet with officials of the Family Planning Association of Nepal, since they distribute less than 10 percent of all pills and condoms used in Nepal, which they largely obtain from the IPPF.

A. Present Logistics System

In general, we have no indication that the contraceptive logistics system has changed since last described by CDC consultants in January 1986. Storekeepers in most areas were trained in supply management since our visit by FP/MCH staff with technical assistance from INTRAH. We were not able to assess the impact of this activity. Storekeepers will need orientation to the new reporting/courier system.

A major problem for the FP/MCH central store at Teku is the lack of a large-capacity truck for long-distance transportation of contraceptives and drugs to regional stores. There are at present two trucks being used, but they are unsuitable for light-weight, large volume shipments such as contraceptives and drugs since their rear beds are small and have low sides. Trucks assigned to other MOH projects are essentially unavailable to FP/MCH.

However, a suitable truck is potentially available to FP/MCH. It is a Tata (Indian-made) long wheelbase type with a large, high-sided cargo bed similar to those used commercially for long distance transport in Nepal and India. It is, however, quite old (15 years) and is presently "retired" from service. From conversations with the FP/MCH supply officer, and after an inspection, we feel that the truck is essentially sound and rebuildable. Since spare parts and mechanical expertise are locally available, we recommend that USAID consider financing the overhaul of this vehicle, the cost of which should be considerably less than the cost of a new truck. The FP/MCH supplies officer could be asked to provide estimates of the cost to completely overhaul the vehicle.

B. Estimates of Contraceptive Requirements by Central and District Stores

As noted by Friedman and Johnson in January 1986, contraceptive commodity use targets are established in each district using a computer model based on desired declines in the crude birth rate as well as assumptions regarding method-specific acceptor and continuation rates. However, the experience of the supply section of the FP/MCH project is that these targets are difficult for district storekeepers to translate into realistic commodity forecasts, since they ignore data on quantities dispensed to users and current stock levels. A meeting was organized with officials of the supply, evaluation, and MCH sections of the FP/MCH project to attempt to resolve this problem. The outcome of this meeting was, in effect, to leave the official targets as they are, since they were mandated by the Ministry of Health for evaluation purposes. However, for supply purposes the central store and district storekeepers will use past data as well as program projections by district family planning officers to forecast commodity needs.

C. Contraceptive Prevalence

In 1986, a contraceptive prevalence survey (CPS) was conducted in Nepal with UNFPA assistance. Preliminary data shown in Table 1 compares contraceptive use by method, as measured by this survey, with the results of the 1981 CPS and the 1976 Nepal Fertility Survey. Although total contraceptive prevalence has more than doubled since 1981 from 7 to 15 percent, almost all the increase is attributable to an increase in the use of female and male sterilization. Current use of AID-supplied methods changed very little since 1981 as the proportion of women using pills, IUDs and condoms in 1986 is virtually the same as it was in 1981, at 1.1, 0.2, and 0.6 percent, respectively. Although the 1986 CPS also included male respondents, the preliminary data available

did not include method-specific current use as reported by males. Of male respondents, 18.5 percent reported current contraceptive use as compared to 15.0 percent reported by women. However, until final data is available, we do not know if this is a true difference or due to sample variation.

D. Supply Requirements

Assuming that the 1987 mid-year* population of Nepal is 17,800,000, 22 percent of the population are married women of reproductive age (MWRA), and 1.1 percent of these women are using pills, the number of pill users would be 43,000. Thus, over a 12-month period they would require 13 cycles of pills each, or a total of 560,000 cycles. Similarly, using 100 condoms and 0.4 IUDs per year, requirements for these methods would be 2,350,000 condoms and 3,200 IUDs.

However, the most recent reports from all programs on contraceptives dispensed to users show somewhat higher usage of these methods, particularly of condoms (See Table 2). According to these reports, 678,754 cycles of pills and 6,094,406 condoms were dispensed by the MOH-supplied programs during the most recent 12-month period. In addition, the CRS program sold 148,856 cycles of pills and 5,089,152 condoms.

The USAID HPN Officer feels pill and condom use has substantially increased in the past 2 years due to the hiring of additional field staff and a greater emphasis being placed on the use of reversible methods, particularly the pill as compared to sterilization. (The MOH supply officer also reports depleted pill stocks). In our judgement, therefore, the above service statistics data on distribution of methods is a more accurate indicator of contraceptive use, especially of condoms, although pill statistics may slightly overstate actual use. Therefore, USAID officials and ourselves estimate that product use by the MOH for the next 12-month period will be 600,000 cycles of pills and 6,000,000 condoms. We accept the CRS projections as they are because of this program's accurate reporting.

D. Logistics Information

As found by Friedman and Johnson in January 1986, adequate information on contraceptives dispensed to users exists in principle at almost all program levels. In addition, the FP/MCH project (but not the ICHSDP) receives a report from districts on stocks issued to clinics and stocks on hand for all drugs, including contraceptives, at the regional and district store levels. However, as recently noted by USAID, these systems "function poorly" and "reports are typically late, often incomplete, and/or confusing." In other words existing information is not effectively being transmitted to managers.

During our initial meetings, we learned of a new reporting system which had been designed by FP/MCH officials and which is presently under study. In the proposed system, district level stock reports will be expanded to henceforth include data on total stock on hand in all the clinics and with all panchayat-based (village-based) health workers (PBHWs) in the districts. These data will be gathered from stock report forms filled out by clinics and PBHWs (See Figures 1, 2, 3). This information will provide a much more accurate picture of the total stock situation in the country and, according to the FP/MCH supply officer, should avoid the "crises" of the past when district stores

*World Population Data Sheet, Population Reference Bureau, 1986.

were seemingly experiencing stockouts of commodities when, in fact, there may have been sufficient stocks at the clinic and PBHW levels.

These reports will be collected within districts on a monthly basis by PBHWs and their "intermediate supervisors." Districts will be divided into "easily accessible" and "remote" districts. For easily accessible districts, all reports must reach the district office by the 5th day of the succeeding month and for remote districts, by the 10th. (According to FP/MCH staff, in no district is any point more than 5 days walk from the district headquarters.)

District reports will then be hand-carried by the assistant statistician or other district staff member to "report collection points" located at certain selected district and regional offices. From easily accessible districts, reports should reach the collection point by the 7th of the succeeding month and from remote districts by the 25th. From the specified collection points, a staff member of that district office will carry all collected reports to the FP/MCH central office using public transportation; that is, by bus or by air. From easily accessible districts, these should reach Kathmandu by the 10th of each month and from remote districts by the 10th of the succeeding month. In this way, reports from both categories of districts will be collected and dispatched, in many cases from the same collection point, on the same date; those from easily accessible districts for the previous month and those from remote districts for the month prior to that. The FP/MCH project will institute penalties for those districts which fail to report (See Figure 4).

In addition to stock reports, clinics and PBHWs will be requested to provide much more accurate service statistics in the proposed system. A "continuity and default form" (client recordkeeping form) will be used which will provide a measure of active users at any point in time, rather than the number of new and old acceptors who have visited a clinic or have been visited by a PBHW (See Figure 5). This form uses a calendar system where horizontal lines are drawn whose length correspondence to the number of months a woman is "covered" by a supplied method. The number of active users is determined by vertically counting the horizontal lines at the end of any given month or other time period. A count of active users of reversible methods (pills and condoms) provides a measure of contraceptive prevalence that more truly reflects program performance than just a count of visits.

E. Recommendations--Logistics Information

We recommended to Mr. Ramesh Bhatta, and he agreed, that the new reporting/courier system be fieldtested in a few districts before being introduced in all 52 FP/MCH districts. The following issues should be evaluated during the fieldtest:

1. Whether intermediate supervisors should collate the reports of PBHW under their supervision or not;
2. Determine the length of time necessary to collate reports at various levels to see whether the proposed deadlines are practical. Although PBHWs and clinics will merely be asked to provide running balances of stocks on hand, which can be translated into quantities dispensed to users at the central office for each district by using a computer, storekeepers will be required to figure by hand the receipts, issues, and balances for all products stored.

3. Determine whether the deadlines for receiving and sending reports at the collection points are practical.
4. A further recommendation is that the receipt of reports from districts be regularly monitored by FP/MCH central office staff. A wall chart showing districtwide receipt or nonreceipt of reports by the required deadlines would be useful. This could also be monitored by USAID personnel.

We also suggested experimenting with reducing the frequency of reporting to bi-monthly or quarterly. However, FP/MCH staff said the Ministry of Health requires monthly reporting from all projects. We similarly suggested reducing the frequency of logistics reports, as these are not reviewed at the MOH. However, the logistics officer said that this has been tried in the past with poor results, since field personnel tended to overlook the more infrequent reports even more than they now do monthly reports.

To implement the new reporting/courier system, no organizational changes are necessary and no new personnel will be hired (by order of the MOH). However, the job description of certain categories of personnel will have to be changed to reflect their new duties in preparing, transmitting, and collating reports, both within districts and in transmitting them to Kathmandu.

Once data produced by the reporting/courier system is regularly being reviewed at the FP/MCH central office, certain analyses can be made and presented in graphs showing trends over time. Data on distribution to users by clinics and PBHWs can be used to calculate CYP. Data on stock on hand, combined with distribution data, can be used to monitor the number of months supply on hand at individual district warehouses, clinics, and PBHWs, as well as total months of supply on hand. The number of months supply on hand should be calculated using average monthly distribution for the past 6 months and compared with pre-established minimum and maximum supply levels, such as:

<u>Supply Location</u>	<u>Minimum</u>	<u>Maximum</u>
Pathlaiya Warehouse and Teku Warehouse	9 months	15 months
Regional Warehouses	6 months	9 months
District Warehouses	1-6 months	3-12 months (Depending on accessibility)
Clinics/PBHWs	1-3 months	3-6 months (Depending on accessibility)

Since the data on distribution combined with data on active users should be more accurate than at present, it could be directly used to calculate future commodity requirements by taking into account past use and trends as presented on graphs. In order to monitor progress and facilitate forecasting, USAID personnel should be given copies of all such reports, including graphs, every 6 months.

The accuracy/reliability of reports should be monitored through regular physical inventories, (preferably as part of supervisory visits) by client records surveys, and by contraceptive prevalence surveys every 3-5 years. CDC/JSI can provide technical assistance in these activities.

A major determinant of the success of the new reporting/courier system will be the provision of additional financial resources, both for the collection and transmission of reports. We recommend that USAID/Nepal provide the following:

1. Funds for TA/DA (per diem and travel expenses), particularly in the hill districts where there are additional premiums over normal TA/DA allowances. Ramesh Bhatta should prepare a budget for anticipated TA/DA, bus, and plane fare expenses.
2. 300 solar-powered hand calculators for PHHWs, clinic and district staff to aid in preparing reports. (These cost less than \$10 in the U.S.) Mr. Bhatta should come up with a more precise number of calculators that will be needed.
3. Technical assistance after the system has been in operation for some time to monitor the operation of the reporting/courier system itself and to evaluate the types of reports prepared at the FP/MCH central office. Although the system has been extremely well-designed and much thought has obviously gone into all aspects of its operation, an outsider's viewpoint is frequently useful from time to time to provide a fresh look at complex activities of this type. CDC and/or JSI personnel would be available for this or to assist in the training of field staff, if requested.



Jay S. Friedman, M.A.

TABLE 1

Percentage of Currently Married Women Reported to
be Using a Family Planning Method, by Specific Method,
1976, 1981, and 1986

Method	NFS* 1976	NCPS** 1981	NFFS*** 1986
Male sterilization	1.9	2.9	6.0
Female sterilization	0.1	2.4	6.6
Oral Pills	0.5	1.1	1.1
Injectable	-	0.1	0.5
IUD	0.1	0.1	0.2
Condom	0.3	7.0	0.6
Total	3.0	7.0	15.0
Number of cases	5501	5876	5031

*NFS-Nepal Fertility Survey

**NCPS-Nepal Contraceptive Prevalence Survey

***NFFS-Nepal Fertility and Family Planning Survey

From: Preliminary Report, July 1986, Findings from Nepal Fertility and Family
Planning Survey, FP/MCH Project Ministry of Health, Planning, Research and
Evaluation Division.

TABLE 2

Estimated Contraceptive Distribution to Users Derived
 From Data Available for Most Recent 12-Month Period
 FP/MCH, Voluntary Agencies, ICHSDP and CRS

	<u>Pill Distribution</u> <u>(Cycles)</u>	<u>Condom Distribution</u> <u>(Pieces)</u>
FP/MCH (Nepal Fiscal Year 85/86)	414,552	2,874,756
Voluntary Agencies (Nepal Fiscal Year 85/86)	195,763	2,516,397
ICHSDP (Nepal Fiscal Year 85/86)	<u>60,231</u>	<u>703,533</u>
Total-MOH supplied agencies	670,546	6,094,406
CRS (2/86-1/87)	<u>148,856</u>	<u>5,089,152</u>
Grand Total	819,402	11,183,838

*Mother's clubs, Ex-Service Man's Association, Red Cross.

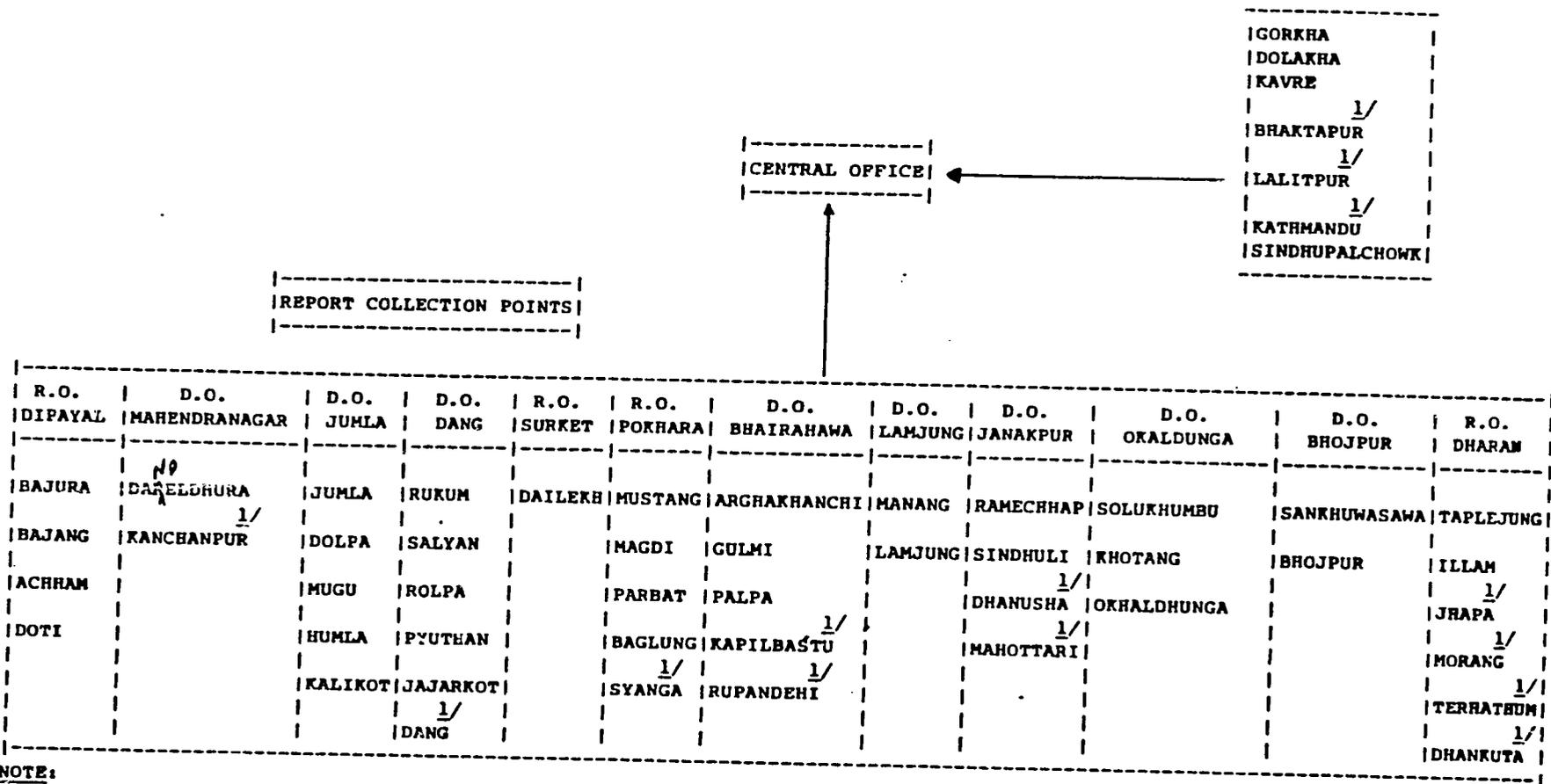
TABLE 3

Contraceptive Stocks on Hand as of Latest Report
MOH-Supplied Organizations and Contraceptive Retail Sales (CRS) Project

	<u>Pill Distribution</u> (Cycles)	<u>Condom Distribution</u> (Pieces)
FP/MCH (In district, regional and central stores)	334,400	2,807,830
Voluntary Agencies	22,044	166,219
ICHSDP	<u>2,400</u>	<u>66,000</u>
Total-MOH supplied agencies	235,844	3,040,049
(Number of months supply on hand as per Table 2. All MOH-supplied facilities.)	(6.4)	(5.4)
CRS	192,929	8,442,524
(Number of months supply on hand as per Table 2. CRS Project)	(15.5)	(19.9)

R.O. = REGIONAL OFFICE
D.O. = DISTRICT OFFICE

FIGURE 4
NEPAL FAMILY PLANNING/MATERNAL CHILD HEALTH PROJECT
MONTHLY PROGRESS REPORT
FLOW CHART



NOTE:

- A) 1/ Easily Accessible Districts:
- Report collected from PBHW/Clinics should reach District Office by 5th of next month.
 - District Office has to submit the collected reports to the specified Collection Points by 7th and Collection Points has to submit the report to Central Office by 10th of that month.
- B) Remote Districts:
- PBHW/Clinics has to submit report to the district office by 10th of next month
 - District Office has to submit the report to the Collection Points by 25th of that month and the Collection Points has to submit the report to Central Office by 10th of the following month.

