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MEMORANDUM

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DATE: May 25, 1978

TO : William H. Foege, M.D., Director
Center for Disease Control
Through: Philip S. Brachman, M.D.
Director, Bureau of Epidemiology (BE)

PHS

PD-AMQ-6666

FROM : Program Analyst, Program Evaluation Branch (PEB)
Family Planning Evaluation Division (FPED), BE

SUBJECT: Resource Support Services Report: Bangladesh, February 8-28, 1978

- I. SUMMARY
- II. PLACES, DATES, AND PURPOSE OF TRAVEL
- III. PRINCIPAL CONTACTS
- IV. OBSERVATIONS
- V. RECOMMENDATIONS
- VI. CONCLUSION

I. SUMMARY

This was the second evaluation of the contraceptive supply system, which was designed by the GOB, UNICEF, and CDC in February-March 1976. The supply system is making good progress. Regional warehouses have been rented in Khulna and Chittagong, and the central warehouse in Dacca is about completed. The 2 Regional and 19 District warehouses are stocked. The principal problems remaining are at thana and lower levels caused by lack of funds for transportation and inadequate storage facilities. Problems with port clearance have been solved, and few shipments take more than 2 weeks to clear.

Good data are available on shipments from district to thana offices. These data show that, as of December 1977, approximately 1 million cycles of pills and 3.25 million condoms are moving through the system each month. During the last 6 months of 1977 the quantities shipped to thanas were increasing at an average rate of 44,000 cycles of pills and 137,000 condoms per month.

The PCFP Directorate is employing 62 sub-divisional officers whose total function is supervision. To date 39 have been employed. While this should improve supervision, other factors, such as the inability to fill vacant posts and low morale (caused by a recent downgrading of positions) are working against the program.

The project should shift emphasis from districts to thanas to work out the existing problems. Most of the data analysis has been done by USAID; this responsibility should be shifted to the PCFP Directorate when the new warehouse is completed. This includes having PCFP supervisors use the USAID-developed supervisory checklists.

A study should be made to determine the magnitude of thana office storage problems, and steps should be taken to solve them. In the meantime, thanas should be fully supplied, even if supplies must be stored in offices. The PCFP Directorate should begin to bring other commodities such as drugs, vaccines, etc., into the system. Also, a new system for managing non-expendable property should be designed.

The above points were discussed at the program review with USAID and PCFP program officials in attendance.

II. PLACES, DATES, AND PURPOSE OF TRAVEL

1. Dacca, February 10-15, 18-28
2. Chittagong, February 15
3. Cox's Bazaar, February 16, 17

The purpose of this trip was 1) to assist USAID/Dacca, the Bangladesh Population Control and Family Planning Directorate (PCFPD) and the UNICEF Transportation and Equipment Maintenance Project (TEMO) in an evaluation of the supply system which was developed by the CDC/FPED, 2) to determine the status of contraceptives and other supplies and equipment provided by USAID, and 3) to participate in the annual program review of USAID and PCFPD. This trip was made at the request of USAID/Dacca, USAID/Washington, and the Government of Bangladesh. It was in conjunction with a trip to Kabul, Afghanistan, and was in accordance with the Resource Support Services Agreement between USAID and FPED/BE/CDC.

III. PRINCIPAL CONTACTS

Bangladesh PCFPD

- a) M.A. Sattar, Ph.D., Secretary, PCFPD Division
- b) Col. Hashmat Ali, M.D., Director General, PCFP Directorate
- c) N.M. Kahn, Director, Administration, PCFP Directorate
- d) M. Rezaur Rahman, Director, Logistics, PCFP Directorate
- e) G.M. Kamal, District PCFP Officer, Chittagong
- f) S. Ahmad, Supply Officer, Chittagong
- g) M. Rahman, Thana PCFP Officer, Patiya, Chittagong
- h) Mira Ranisen, Family Welfare Assistant, Patiya, Chittagong
- i) Sonowaru Begum, Family Welfare Assistant, Patiya, Chittagong
- j) Md. Kamaluddin, Thana Assistant, Tecknaf, Chittagong
- k) Moslema Khatun, Family Welfare Visitor, Tecknaf, Chittagong
- l) Ahmed Gydassuddin, Ph.D., Statistics and Evaluation Division, PCFP Directorate

2. UNICEF, Bangladesh

- a) Michael Irwin, M.D., UNICEF Representative
- b) Nils-G. Sjoblom, Warehouse Manager, TEMO

3. USAID/Dacca

- a) Joe Toner, Mission Director
- b) Charles Gurney, Chief, H/POP
- c) Vernon Peterson, Chief, Logistics

- d) John Dumm, H/POP
- e) Dallas Voran, H/POP
- f) Anwar Hussain, Logistics
- g) S.C. Huber, H/POP

OBSERVATIONS

The supply system is making good progress. Although there continue to be a considerable number of errors and delays, all districts and approximately 90% of the thanas are submitting reports. At the end of 1977 the system was moving approximately 1 million cycles of pills and 3.25 million condoms per month to thanas. Over the last 6 months of 1977 the quantities flowing through the system were increasing at a rate of approximately 5% per month.

The program shows signs of being ready to "take off" if good management is continued and solutions can be found for its most serious problems. This cannot be overemphasized as the system is in such a dynamic state that lack of proper action at this time could cause serious damage to the total program. As more field workers are posted, and their production increases they must be assured of a continuing flow of supplies to serve their clients. Nothing is more destructive to this type of program than to have clients motivated to use contraception and using contraceptives successfully only to have their flow of supplies interrupted.

During the past year, the USAID/Dacca Supply and Logistics Branch has been making spot checks of the operation of the supply system in thanas (see Attachment A). Table 1 is a summary of the supply position in the 23 thanas checked since August 1977. This table shows that supplies in many of these thanas were dangerously low. Our original recommendation (see page 6 of the supply manual) was that thanas should maintain a minimum of 4 months and a maximum of 8 months supplies on hand. Only 4 of the 23 thanas checked have more than 4 months supply of pills on hand, and 3 had more than 4 months supply of condoms on hand. Eight thanas had less than 1-month's supply of pills, and 12 had less than 1 month's supply of condoms. As the operation of the system improves, these minimum and maximum levels can be adjusted to the capabilities of the system; however, at present, every effort should be made to comply with the original recommendation. Operating at the present supply levels will result in, at best, numerous transfers between thanas and field workers to assure continuing flow to clients, which is costly and confusing; and, at worst, an interruption of service to clients.

The reasons given for the low levels in thanas were that there was not sufficient money allocated to pay for moving supplies from districts to thanas and that many thanas do not have sufficient secure storage for the desired quantities. Probably another reason is that client demand was underestimated.

The movement of supplies through the district offices was erratic during 1977, as shown in Table 2. This is a typical pattern seen in a rapidly expanding program. There was a temporary shortage of condoms during the year, which, no doubt, caused shortages and losses of production. This table illustrates the need for planning so that supplies arrive in-country at the time and in the quantities needed to keep the program moving. This planning cannot be done without prompt, accurate reporting from all levels of the program.

Table 3 shows the supply position for pills and condoms for all districts for the last 6 months of 1977. The number of month's supply on hand was calculated by computing the average issues from districts to thanas for the 6 months immediately preceding the month in question and dividing the end-of-month inventory by this figure. The original recommendation for district stocks was that they should maintain a minimum of 6 months and a maximum of 12 months supplies on hand (see page 13 of the manual). During this period districts were in compliance with this recommendation; only 41% of the time for pill stocks; they were under-stocked 45% of the time and over-stocked 14% of the time. The figures for condoms are 9%, 88%, and 3%, respectively. In addition, there were 8 instances which showed stockouts for condoms.

Further evidence for maldistribution of pills and condoms is presented in Tables 4 and 5. Table 4 shows the percentage distribution of population by district and the quantities and percentage distribution of pill and condom stocks at the end of 1977 (this table assumes that the percentage of married women of reproductive age [MWRA] will closely parallel that of the general population), while Table 3 shows supply levels according to quantities being distributed.

Table 5 is a comparison of the MWRA distribution with performance. We have assumed that, since supply levels are low in thanas, the issuance of supplies to thanas will closely parallel actual distribution to users. In constructing this table, we have used 13 cycles for pill users and 100 pieces for condom users per year to represent 1 year of protection. We have made no allowance for waste. Our formula for estimating production is:

$$\% \text{ served} = \frac{\frac{Px12}{13} + \frac{Cx12}{100}}{\text{MWRA}} \times 100$$

where:

P = average number of pill cycles distributed per month

C = average number of condoms distributed per month

MWRA = number of married women of reproductive age

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Using this formula, we have also estimated that of the total number of pill and condom users being supplied through the districts, 69.5% are using pills and 30.5% are using condoms.

Further analysis of these tables will be left to the reader. The reasons given for the maldistribution shown here were the inability of some district offices to store the recommended quantities, inaccurate and untimely reporting, and the temporary shortage of condoms (which has since been alleviated) during 1977. No doubt, rapid program growth has also played a part in this problem.

One of the goals of the program in 1976 was to place 1 year's supply of pills and condoms in each district; this was done for pills in every district except 2 and for condoms in every district except 5. At the end of 1977, the stock level for pills in all districts except 4 were below those for July 1976, and the levels for condoms were below 1976 in all but 3 districts. The program has thus demonstrated its ability to place the required quantities in districts, but there remains the task of maintaining the desired levels.

During 1977 regional warehouses were established at Chittagong and Khulna. These warehouses are being stocked and brought into the system. The central warehouse in Dacca is nearing completion and should be ready for stocking in March or April 1978. The present plan is to post the personnel responsible for the supply system in offices in the new warehouse and to convert all records and procedures for supply management to the new system at that time.

The problems of port clearance have been solved. The manager of the Chittagong Regional Warehouse is responsible for this activity and at present, shipments are usually cleared within 2 weeks.

Stocks-in-country and scheduled shipments appear to be adequate for the program. The figures are presented in Tables 6 and 7.

The program has established positions for 62 sub-divisional officers whose total function will be to supervise the program at thana and field levels. At the time of my visit, 39 of the positions had been filled, and training was scheduled for March. This should help alleviate the problem of supervision.

A recent action by the GOB civil service has resulted in the downgrading of a number of positions in the program. This has resulted in a loss of morale in the program. The program is also having problems filling personnel vacancies at both central and field levels. Hopefully, these problems will be rectified, and the program will continue to move forward.

At the request of Sallie Craig Huber, I presented a seminar on Patient Flow Analysis (PFA), the clinic evaluation technique which was developed for use in clinic-based family planning programs in the U.S. This seminar was attended by 11 clinic managers from the Dacca area, 1 person from UNICEF, and 4 from USAID. Those in attendance were interested in trying to apply this technique to their clinics. The problems that they described are very similar to those that we have observed in the U.S.

PFA is essentially a time and motion study which produces graphical and statistical representations of a clinic session (see Attachment B). It is designed to be used with a computer, but the calculations and graphs can be produced by hand. Materials describing the system have been sent to Mrs. Huber.

V. RECOMMENDATIONS

1. The supply system must be modified to allow supplies to flow from districts to thanas as needed. The original plan was to require Thana Family Planning Officers to take their supplies when they attended the monthly meeting at the district; this obviously is not working. This problem should be thoroughly studied and solved. In any case, funds must be made available immediately to allow the supplies to flow while a permanent solution for this problem is sought. It might be necessary to give the District Family Planning Officer the responsibility for seeing that all his thanas are supplied, even if it means that the district must deliver supplies to some thanas.
2. The lack of storage capacity in thanas must also be investigated and rectified. Those thanas with adequate storage capacity should be fully stocked as soon as possible, and others should maintain stocks as near to the recommended levels as they have capacity to store. It might be possible to make up for this deficiency by issuing higher levels of supply to clinics and field workers in thanas with limited storage capacity. This, however, should be considered as a temporary measure.
3. Stocks at all program levels should be brought up to the desired maximum level and maintained between the minimum and maximum levels. If the Population Control and Family Planning Directorate (PCFPD) management feels that the original recommendation on minimum and maximum levels should be modified, they should set new levels and try to operate within those levels. My recommendation is that, until the system is working according to plan, the original levels should be used.
4. The PCFPD should shift its emphasis from districts to thanas. This does not mean that all the supply problems in the districts are solved and that the districts do not need continuing guidance from senior officers. Since the new Sub-divisional Officers are being posted and trained to supervise thana and field operations,

this shift of emphasis is in order. The senior officers in the supply system must be sure that these new supervisors understand the supply system and appreciate its importance. It is only in this way that problems in the thanas can be solved. The aiding agencies, particularly the USAID Supply and Logistics Branch and the UNICEF/TEMO should participate in this training and, along with PCFPD counterparts, followup on the activities of the new officers when they are posted in the field.

5. The USAID Supply and Logistics Branch has developed a checklist for use in evaluating performance in thanas. This checklist should be modified to include information on clinics and field workers, and the frequency of stockouts should be recorded. After its modification the checklist should be given to the Sub-divisional Officers for their use in documenting their supervisory activities. Similar checklists should be developed for use at district and field levels.

6. At the time of my visit the USAID Supply and Logistics Branch was doing most of the analysis of data in the supply system. The responsibility for this analysis must ultimately be borne by the PCFPD. When the supply office is established in the new central warehouse, USAID should begin to shift this responsibility to the PCFPD. Personnel should be identified and charged with this responsibility, and USAID and UNICEF personnel should assist in their training. Since this is a rather complicated process which requires knowledge and experience in supply management, it may take some time for the total responsibility for this activity to be transferred.

7. The PCFPD should continue in its efforts to fill the vacant posts with qualified personnel. Pay scales and special allowances for personnel in the PCFPD should be compared with others in the government to see to it that PCFPD personnel are fairly treated. This should help to minimize the effect of the morale problem. It is also important that senior officers make supervisory visits to the field as frequently as possible so that field personnel do not feel abandoned.

8. At the present time the supply system is being used exclusively for contraceptives. Other commodities, such as drugs, vaccines, office supplies, etc., are being handled by the PCFPD. The supply system was designed to accommodate these materials, and they should be brought into the system, starting with central and district levels, when the new warehouse is established. Consideration should also be given to the establishment of a system for managing non-expendable items such as medical kits, furniture, etc.

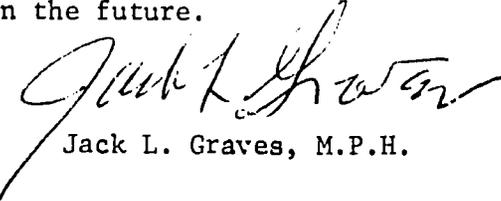
VI. CONCLUSIONS

It is gratifying that the PCFPD supply system is primarily suffering from problems that are associated with success. This does not mean that the problems are less serious than they would otherwise be; quite

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the contrary, as a breakdown in supportive services at this time could cause a program setback that would be extremely difficult to recover from.

I appreciate the opportunity to work in this program and am looking forward to returning to Bangladesh in the future.



Jack L. Graves, M.P.H.

Attachments

TABLE 1

Supply Position of Thanas Visited by USAID Logistics Personnel
August 1977-February 1978

<u>Date of Visit</u>	<u>District</u>	<u>Thana</u>	<u>Pills on Hand (mc)</u>		<u>Condoms on Hand (pieces)</u>	
			<u>Quantity</u>	<u>Month's Supply*</u>	<u>Quantity</u>	<u>Month's Supply*</u>
8/24	Pabna	Shujanagar	4,631	3.3	2,736	0.4
8/27	Kushtia	Bheramara	63	0.1	1,872	1.1
8/27	Patuakhali	Amtali	6,333	4.4	0	0
8/29	"	Barguna	6,600	3.8	16,056	1.4
10/12	Dacca	Joyderpur	3,243	2.5	15,768	3.2
10/18	Khulna	Fakirhat	7,740	5.4	21,744	3.2
10/18	Dacca	Shibalaya	4,860	2.9	6,480	0.9
10/19	"	Narshingdi	2,100	1.3	444	0.1
10/27	"	Shirajdikhan	60	**	144	**
11/1	"	Nawabganj	3,473	1.8	4,608	0.4
11/2	"	Dohar	954	0.9	4,836	0.8
11/10	Bogra	Sherpur	1,800	0.7	23,328	9.4
11/11	"	Joipurhat	2,469	0.6	984	1.9
11/19	Chittagong	Boalkhali	1,276	1.4	35,328	37.7
11/29	Dacca	Savar	3,600	2.0	11,232	0.9
1/12	"	Ramna	2,508	1.1	18,012	0.5
1/17	"	Shibpur	240	0.1	8,544	0.6
1/18	"	Avaihazar	1,101	0.6	14,940	2.0
1/18	Jessore	Manirampur	1,620	0.7	4,680	0.4
1/21	"	Jhikargacha	2,460	1.2	13,788	0.8
1/23	Dacca	Kaliakair	11,100	9.7	14,112	1.0
1/24	"	Saturia	1,980	2.2	18,828	3.4
2/16	Chittagong	Patiya	16,626	9.2	41,184	4.8

*Based on issues for the most recent 6 months prior to the visit.

**<.1>0

Source: USAID/Dacca, Supply and Logistics Branch

TABLE 2

Monthly Movements of Pills and Condoms Through Districts - 1977

Month	Pills (000 mc)		Condoms (000 pieces)	
	Received from Central	Issued to Thanas	Received from Central	Issued to Thanas
January	0	883	0	2,935
February	93	771	1,152	2,087
March	330	615	1,267	3,187
April	998	518	818	2,553
May	2,606	526	979	1,915
June	45	858	1,740	1,814
July	1,401	864	4,397	3,006
August	505	1,513	0	2,790
September	626	485	2,678	2,068
October	1,049	997	3,975	2,842
November	1,058	988	12,110	4,664
December	402	899	5,354	4,053
TOTAL	9,113	9,918	32,034	33,914

Source: USAID/Dacca, Supply and Logistics Branch

TABLE 3

Number of Month's Supply on Hand in Districts* at the End of the Month
July-December 1977

District	Pills						Condoms					
	July	Aug.	Sep.	Oct.	Nov.	Dec.	July	Aug.	Sep.	Oct.	Nov.	Dec.
Dinajpur	14.0	9.0	10.5	7.2	12.5	10.1	3.7	2.1	5.5	0.4	5.1	3.2
Rangpur	2.5	0.3	1.5	2.4	2.6	0.8	0.2	0	2.1	0.1	3.4	0.9
Bogra	7.4	2.7	3.1	8.5	3.0	2.6	31.4	0.9	0.3	0.3	0.2	0.1
Rajshai	6.7	1.5	5.5	3.8	2.1	1.5	6.1	1.9	1.3	0.5	11.1	7.0
Pabna	26.3	14.7	10.9	9.0	7.9	5.5	3.9	1.0	1.4	-	7.0	4.7
Kushtia	8.0	6.2	3.4	2.1	9.1	6.9	1.9	0.1	0.6	5.3	0.4	3.8
Jessore	13.4	7.5	7.2	7.0	6.8	5.8	2.8	1.1	1.0	1.2	-	2.2
Khulna	0.6	3.8	5.5	4.6	4.0	6.3	0.7	0.2	3.4	0.4	8.6	10.2
Faridpur	2.1	6.2	6.2	4.1	4.7	4.3	0.4	-	-	2.0	0.2	1.9
Mymensingh	10.4	9.2	8.8	6.5	6.6	5.4	2.5	2.2	1.5	0.1	12.6	8.4
Tangail	12.8	8.9	10.7	9.3	9.2	10.5	1.4	0.2	0	0	5.4	3.9
Dacca	3.5	1.8	2.0	1.8	1.2	0.7	0.6	-	0.2	2.0	0.5	1.7
Barisal	6.3	3.2	2.9	3.2	2.7	1.4	1.6	0.3	0.1	0.6	0	0
Patuakhali	3.9	1.2	0.8	3.1	2.2	1.1	0	0	0	12.4	8.2	3.2
Sylhet	26.9	10.0	9.5	9.1	8.0	9.7	2.9	0.4	0.1	5.5	5.2	3.0
Comilla	25.0	15.7	16.3	10.7	13.6	15.5	1.9	0.1	3.0	1.7	0.5	-
Noakhali	30.1	49.0	32.0	16.3	10.5	8.3	2.3	2.8	2.6	2.0	4.9	3.2
Chittagong	9.3	8.0	7.3	5.5	5.0	6.3	3.3	3.1	2.7	3.3	2.4	11.3
Chittagong HT	5.3	4.4	8.3	6.7	7.1	3.4	0.1	0.1	0.1	0.1	137.2	23.1
TOTAL	8.6	6.0	6.4	5.8	5.4	4.9	1.9	0.7	1.1	1.5	3.9	3.8

*Based on average 6 month's issues to thanas for the most recent 6 months
- = <.1>0

Source: USAID/Dacca, Supply and Logistics Branch

TABLE 4

Pill and Condom Supply Position of Districts, December 31, 1977*

<u>District</u>	MWRA % of <u>Total</u>	Pills on Hand (000 mc)		Condoms on Hand (000 pieces)	
		<u>Quantity</u>	% of <u>Total</u>	<u>Quantity</u>	% of <u>Total</u>
Dinajpur	3.6	399	8.5	423	3.4
Rangpur	7.6	111	2.4	183	1.5
Bogra	3.1	199	4.3	12	0.1
Rajshai	6.0	118	2.5	1,567	12.7
Pabna	3.9	162	3.5	789	6.4
Kushtia	2.6	164	3.5	498	4.0
Jessore	4.7	269	5.8	499	4.0
Khulna	5.0	183	3.9	1,726	14.0
Faridpur	5.7	173	3.7	518	4.2
Mymensingh	10.6	367	7.8	1,669	13.5
Tangail	2.9	226	4.8	582	4.7
Dacca	10.6	55	1.2	766	6.2
Barisal	5.5	70	1.5	0	0.0
Patuakhali	2.1	26	0.6	288	2.3
Sylhet	6.7	672	14.4	173	1.4
Comilla	8.1	877	18.8	6	**
Noakhali	4.6	281	6.0	605	4.9
Chittagong	6.0	294	6.3	1,122	9.1
Chittagong HT	0.7	29	0.6	905	7.3
TOTAL	100.0	4,676	100.0*	12,330	100.0*

* May not add to 100 due to rounding
 ** <0.1 > 0

Source: USAID/Dacca, Supply and Logistics Branch

TABLE 5

Average Quantity of Contraceptives Issued per Month to Thanas
July-December 1977

<u>District</u>	(1)		<u>Pills Issued</u>		<u>Condoms Issued</u>	
	MWRA % of <u>Total</u>	% of MMWR <u>Served</u>	<u>Quantity</u>	% of <u>Total</u>	<u>Quantity</u>	% of <u>Total</u>
Dinajpur	3.6	9.1	39,700	4.1	130,896	4.0
Rangpur	7.6	12.6	137,600	14.4	216,720	6.7
Bogra	3.1	19.3	77,504	8.1	203,040	6.3
Rajshah.	6.0	10.4	79,233	8.3	224,640	6.9
Pabna	3.9	7.6	29,327	3.1	167,328	5.2
Kushtia	2.6	9.1	24,000	2.5	130,752	4.0
Jessore	4.7	9.2	46,314	4.8	223,200	6.9
Khulna	5.0	5.9	29,094	3.0	168,480	5.2
Faridpur	5.7	7.6	40,300	4.2	269,568	8.3
Mymensingh	10.6	5.1	68,160	7.1	193,536	6.0
Tangail	2.9	8.1	21,500	2.2	148,752	4.6
Dacca	10.6	7.7	82,968	8.7	449,568	13.9
Barisal	5.5	6.2	51,000	5.3	61,920	1.9
Patuakhali	2.1	9.8	23,900	2.5	90,432	2.8
Sylhet	6.7	6.6	69,420	7.2	58,608	1.8
Comilla	8.1	5.6	56,450	5.9	171,936	5.3
Noakhali	4.6	7.4	34,124	3.6	189,792	5.9
Chittagong	6.0	5.7	46,900	4.9	98,928	3.1
Chittagong HT	0.7	11.2	8,554	0.9	39,168	1.2
	(2)			(2)		(2)
TOTAL	100.0	8.0	957,710	100.0	3,237,120	100.0

(1) 1% = 160,000

(2) May not add to 100 due to rounding

Source: USAID/Dacca, Supply and Logistics Branch

TABLE 6

CONTRACEPTIVES: STOCK POSITION AS OF FEBRUARY 1978

<u>Location</u>	<u>Noriday I-50 (Cycles)</u>	<u>C-5 (Cycles)</u>	<u>Ovral (Cycles)</u>	<u>Condom (Pcs)</u>
1. Central Depot	234,600 (USAID)	-	189,000 (UNFPA)	377,280 (UNFPA)
2. Chittagong Depot	1054,200 (USAID)	-	-	264,960 (FPIA) 44,028,000 (USAID)
3. Khulna Depot	533,400 (USAID)	268,560 (DANIDA)	216,000 (UNFPA)	-
4. Railway Godown/Ctg	783,600 (USAID)	-	327,000 (UNFPA)	252,000 (USAID)
5. Chittagong Jetty/Shed (Under Clearance)	-	-	-	33,337,200 (USAID)
<hr/>				
Total: USAID	2,605,800	-	-	77,617,200
UNFPA	-	-	732,000	377,280
FPIA	-	-	-	264,960
DANIDA	-	268,560	-	-
<hr/>				
Grand Total:	2,605,800	268,560	732,000	78,259,440
<hr/>				
Total District stock as of December 1977	4,675,662 1/	-	-	12,329,568
Estimated total thana stock as of December 1977	1,915,420 1/	-	-	6,474,240

1/ = Consolidated figure including OP-80 and C-5 tablets

CLB:AHussain:ar
2/27/78

Source: USAID/Dacca, Supply and Logistics Branch

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TABLE 7

FEBRUARY 9, 1978

USAID FINANCED FAMILY PLANNING MATERIALS
ARRIVAL PROJECTION

	PIO/C #	Total PIO/C Qty	Qty Arrived	Quantity due (Feb - July 1978)					
				February	March	April	May	June	July
Oral Pills	388-001-5-70024	20,000,000 Mcs ^{1/}	x	x	x	x	x	x	x
OP (FY-78)	388-001-5-80018	20,000,000 Mcs ^{2/}	x	x	x	x	x	x	x
Condoms	388-001-5-70021	400,000 Grs	400,000 ^{3/}	400,000 ^{3/}	x	x	x	x	x
Condoms	388-001-5-70040	400,000 Grs ^{4/}	257,494	257,494	64,494	78,012	x	x	x
Condoms (FY-78)	388-001-5-80019	1,000,000 Grs ^{5/}	x	x	x	x	83,300	83,300	83,300
Medical Kit #5 (Vasectomy)	388-001-5-70041	99,972 vials Emko Foam 100 ctns Vasectomy Kits	99,972 vials Emko ^{6/}	100 ctns Vas Kits	x	x	x	x	x

1/ No info about shipment (reminder sent to AID/W)

2/ 1.67 million MCs per month from April 1979

3/ Shipment complete 2/4/78

4/ Shipment is expected to be completed in April 1978

5/ 83,300 Grs per month from May 1978

6/ Emko Foam arrived in November 1977 and Vasectomy Kits due in February 1978.

Source: USAID/Dacca, Supply and Logistics Branch

CLB:SRahman:ar
2/8/78

SM METHOD

Review the overall progress that the thana has made in adopting the SM Method and assess the cause of deficiency, if any.

Form #	In Use		Date Since in Use	<u>Reason for Deficiency (if any)</u>
	Yes	No		
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____

Comments (include measures necessary, as well as those suggested/taken by you to overcome the deficiencies): _____

GENERAL COMMENTS (INCLUDING STORAGE CAPACITY, CONDITION/
FACILITIES)

Signed: _____

Name of USAID Inspector

(For comments, use additional sheet if needed)

1/ In the case of District Storekeeper, mention date of assignment.

PATIENT FLOW ANALYSIS: HOW TO INCREASE
EFFICIENCY IN FAMILY PLANNING CLINICS

Jack L. Graves, M.P.H.
Program Analyst
Program Evaluation Branch
Family Planning Evaluation Division
Bureau of Epidemiology

Meeting of the
Planned Parenthood Federation of America, Inc. and
the Association of Planned Parenthood Physicians
Atlanta, Georgia
October 11-15, 1977

Site Visit to Center for Disease Control
October 14, 1977

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
Center for Disease Control
Atlanta, Georgia 30333

ABSTRACT

A method has been developed for graphical and statistical analysis of patient flow and personnel utilization in family planning medical clinics. Many of the problems associated with patient services and service times are revealed in this analysis. The method is simple, self-administered, and requires a minimum of time from clinic staff. It was tested in the Cook County Hospital (Chicago); the resulting changes in procedures produced substantial improvements in patient services. For example, in the daily afternoon clinic session average patient time in the clinic was reduced 35% from 207 to 153 minutes; the average time patients were receiving services was increased 30%, from 50 to 65 minutes; the average clinic personnel time available (not including clerical) for patient services was increased 86%, from 50 to 93 minutes per patient, and the average time that clinic personnel (including clerical) spent in patient contact was increased 68%, from 37 to 62 minutes. The hospital staff is continuing to seek solutions to unresolved problems, and it is expected that additional improvements will be forthcoming. The hospital will use the method on a continuing basis in an effort to maintain quality service at reasonable cost. The method should be applicable to other outpatient clinic programs. It is presently being redesigned for computer processing, which will make results more timely and data much easier to process.

STATISTICAL SUMMARY

Clinic Type: General, Full Service, Family Planning Clinic
 Conducted in A(N) Urban Hospital During Regular Business Hours

<u>9/20/76</u>		<u>6/13/77</u>	
<u>Actual</u>	<u>Recon- struction</u>	<u>Actual</u>	<u>INTRODUCTION</u>
48	-	53	Appointments were made
42	-	43	Percent of appointments were kept
27	27	28	Family planning patients were served
23	6	6	Scheduled station stops were missed
8	0	2	Unscheduled station stops were made
18	-	18	Personnel were scheduled to work in this clinic
13	8	18	Personnel worked in this clinic
5:30	4:34	5:23	Was the duration of this clinic--first to last patient (hours:minutes)
<u>PATIENT ORIENTED DATA</u>			
25	49	42	Percent of the average patient's time in the clinic was spent in contact with clinic personnel
50	40	65	Minutes were spent by the average patient in contact with clinic personnel
207	81	153	Minutes were spent by the average patient in the clinic
<u>PERSONNEL ORIENTED DATA</u>			
41	55	53	Percent of personnel time available was spent serving patients
37	42	62	Minutes of personnel time were spent with the average patient
90	77	118	Minutes of personnel time were available per patient served
44	17	21	Percent of available personnel time was clerical
30	19	10	Percent of personnel time spent with patients was clerical
<u>COST DATA</u>			
\$ 7.37	\$ 7.03	\$ 9.79	Was the average personnel cost for family planning visits
\$199.00	\$189.72	\$279.67	Was the total personnel cost for this clinic

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RECOMMENDATIONS AND ASSUMPTIONS FOR THE RECONSTRUCTION
Afternoon Session 9/20/76

1. Patients arrive in the same order as the original data shows but 5 at a time at 30 minute intervals. The last 2 arrive at 2:30 p.m.
2. Eight people worked in the clinic; all reported for work at 12:00 p.m. There were: 1 Hospital Receptionist, 1 Family Planning Receptionist, 1 Lab Technician, 1 Social Worker, 1 Exit Nurse, 2 Nurse-Midwives, and 1 Attendant.
3. Each person working in the clinic takes patients on the basis that the patient who is ready for her services first will be taken first.
4. Two minutes is sufficient time for patients to go from the station of last service to the station of next service.
5. Clinic personnel pick up a new patient, if any is waiting, as soon as they finish with the previous patient.
6. The person giving education-social services works with individual patients. She takes 15 minutes with a new patient and 5 with others.
7. The exit functions of checking the IFPC form making sure the patient understands her instructions, giving appointments and giving prescriptions, is done by 1 nurse. She takes 10 minutes for patients receiving prescriptions and 5 minutes for others. All patients stop at this station.
8. Patient No. 16 did not need to see 2 clinicians.
9. Patient No. 8 received services usually provided to initial patients.
10. All other personnel spend the amount of time with patients indicated by the original data.
11. Patients who were scheduled for lab and education could go to either station first.
12. Lab services preceded physical examinations.

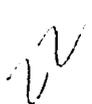
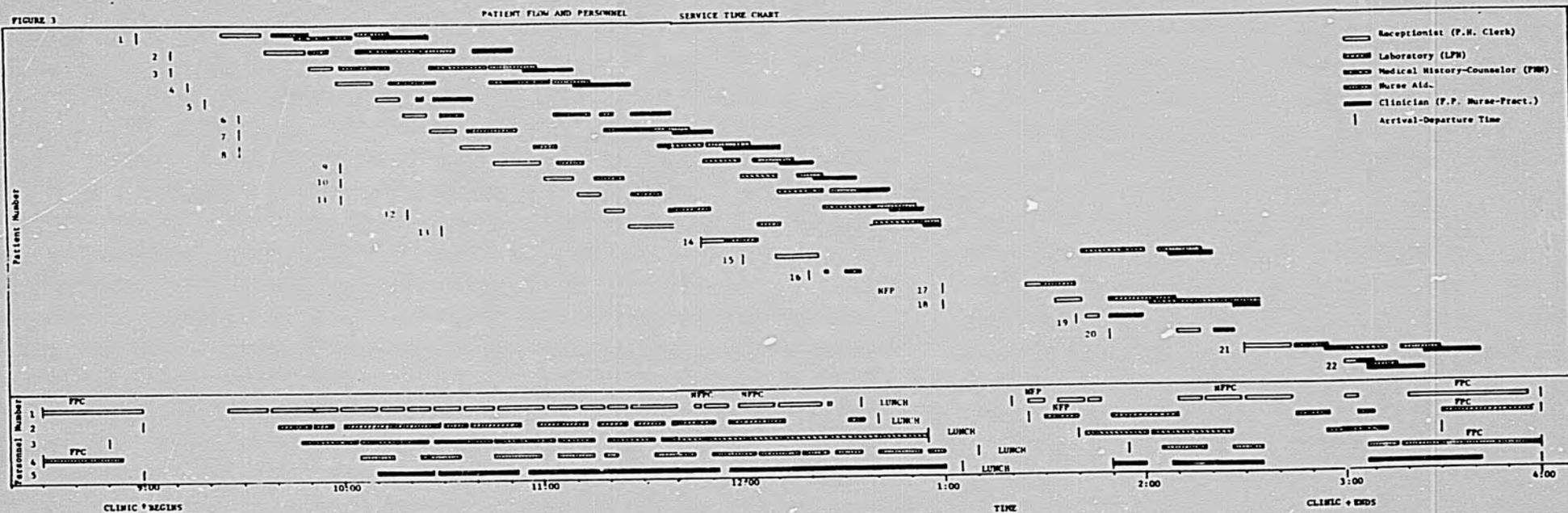


FIGURE 3

PATIENT FLOW AND PERSONNEL SERVICE TIME CHART



Handwritten mark resembling a stylized 'R' or '2'.

Handwritten number '170'.

PATIENT FLOW ANALYSIS

CLINIC REGISTER

1. LOCATION

State _____ (Postal Code) (1-2)

County _____ (Code) (3-5)

Building _____ (Code) (6-7)

2. STUDY NUMBER _____ (8)

3. CLINIC TYPE _____ (Code) (9-14)

4. DATE

Month _____ (15-16)

Day _____ (17-18)

Year _____ (19-20)

5. SCHEDULED TIME OF CLINIC SESSION

Beginning _____ Hour : Min. - A/P (21-25)

Ending _____ Hour : Min. - A/P (26-30)

6. NUMBER OF APPOINTMENTS SCHEDULED _____ (31-33)

7. EARLIEST TIME IN THE DATA SET (see spaces 21-25 above, spaces 12-15 on Personnel Registers, and spaces 13-16 on Patient Registers). Hour : Min. - A/P (34-38)

8. LATEST TIME IN THE DATA SET (see spaces 26-30 above and spaces 16-19 on Personnel Registers). Hour : Min. - A/P (39-43)

9. SCHEDULED PATIENT SERVICES :

Personnel Tasks
Required for This

Visit Type _____ (44-52)

Initial _____ (53-61)

Annual _____ (62-70)

Medical Problem _____ (71-79)

Resupply _____ (80)

PATIENT FLOW ANALYSIS

PERSONNEL REGISTER

PREFIX: (1-8)

- 1. NAME _____ (Code) (9)
- 2. OFFICIAL DESIGNATION _____ (Code) (10)
- 3. CLINIC TASK ASSIGNED _____ (Code) (11)
- 4. DESCRIPTION OF TASK _____

5. TIME YOU ARRIVED FOR WORK IN THIS CLINIC SESSION _____ Hour Min. (12-15)

6. TIME OUT:
 Periods of time, in excess of 15 minutes, when you stopped working in this clinic session for lunch or to perform duties that were not directly related to this clinic session.

	Hour	Min.		Hour	Min.	
from	<input type="text"/>	: <input type="text"/>	til	<input type="text"/>	: <input type="text"/>	(16-23)
from	<input type="text"/>	: <input type="text"/>	til	<input type="text"/>	: <input type="text"/>	(24-31)
from	<input type="text"/>	: <input type="text"/>	til	<input type="text"/>	: <input type="text"/>	(32-39)
from	<input type="text"/>	: <input type="text"/>	til	<input type="text"/>	: <input type="text"/>	(40-47)

7. TIME YOU DEPARTED THIS CLINIC SESSION _____ Hour Min. (48-51)

- 8. IF YOU WERE IN TRAVEL STATUS (entitled to reimbursement for transportation expenses) IN ORDER TO WORK IN THIS CLINIC SESSION:
 - A. MILES TRAVELLED (round trip) _____ (52-54)
 - B. MILEAGE RATE (cents per mile, to nearest whole number) _____ (55-56)
 - C. TIME IN TRAVEL STATUS (minutes, round trip) _____ (57-59)

9. SOURCE OF FUNDS FOR YOUR SALARY _____ (Code) (60)

0. GROSS RATE OF PAY (before deductions) _____ Dollars & Cents Per - (61-68)

PLUS _____ Dollars & Cents Per - (69-73)

1. NUMBER OF DAYS OF SICK AND ANNUAL LEAVE EARNED PER YEAR PLUS HOLIDAYS _____ (74-75)

2. FRINGE BENEFITS (percentage of gross rate of pay to nearest whole number) _____ (76-77)

3. NUMBER OF HOURS IN YOUR NORMAL WORK WEEK (to nearest whole number) _____ (78-79)

(80)

2

PATIENT FLOW ANALYSIS

PATIENT REGISTER

PREFIX: (1-8)

1. PATIENT NUMBER _____ [] [] (9-10)

2. REASON FOR VISIT _____ (Code) [] (11)

3. FAMILY PLANNING METHOD _____ (Code) [] (12)

Hour Min.

4. TIME OF ARRIVAL IN THIS CLINIC SESSION _____ [] [] : [] [] (13-16)

5. TIME OF APPOINTMENT (according to clinic records) _____ [] [] : [] [] (17-20)

6. PATIENT SERVICE TIME:

Clinic Personnel Code

Time Service Started Hour Min.

Time Service Completed Hour Min.

First contact _____ [] _____ from [] [] : [] [] til [] [] : [] [] (21-29)

Second contact _____ [] _____ from [] [] : [] [] til [] [] : [] [] (30-38)

Third contact _____ [] _____ from [] [] : [] [] til [] [] : [] [] (39-47)

Fourth contact _____ [] _____ from [] [] : [] [] til [] [] : [] [] (48-56)

Fifth contact _____ [] _____ from [] [] : [] [] til [] [] : [] [] (57-65)

Sixth contact _____ [] _____ from [] [] : [] [] til [] [] : [] [] (66-74)

[3] (80)

PREFIX: (1-8)

7. PATIENT NUMBER _____ [] [] (9-10)

Card number _____ [2] (11)

Code

Hour Min.

Hour Min.

Seventh contact _____ [] _____ from [] [] : [] [] til [] [] : [] [] (12-20)

Eighth contact _____ [] _____ from [] [] : [] [] til [] [] : [] [] (21-29)

Ninth contact _____ [] _____ from [] [] : [] [] til [] [] : [] [] (30-38)

Tenth contact _____ [] _____ from [] [] : [] [] til [] [] : [] [] (39-47)

Eleventh contact _____ [] _____ from [] [] : [] [] til [] [] : [] [] (48-56)

Twelfth contact _____ [] _____ from [] [] : [] [] til [] [] : [] [] (57-65)

Thirteenth contact _____ [] _____ from [] [] : [] [] til [] [] : [] [] (66-74)

[3] (80)

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PATIENT FLOW ANALYSIS
 STATE CODE XX - COUNTY CODE 999
 BUILDING CODE 99 - STUDY NO. 9

DATA SET CODE: XX-999-99-9

CLINIC TYPE: xxxxxxxxxxxxxx, xxxxxxxxxxx, xxxxxxxxxxxxxxxxxxxxxxxx CLINIC CONDUCTED IN A(N)
 xxxxxxxx, xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx DURING xxxxxxxxxxxxxxxxxxxxxxx.

INTRODUCTION

- 999 APPOINTMENTS WERE MADE (SEE TABLE 1)
- 99 PERCENT OF APPOINTMENTS WERE KEPT
- 999 FAMILY PLANNING PATIENTS WERE SERVED (SEE TABLE 3)
- 99 NON-FAMILY PLANNING PATIENTS WERE SERVED
- 99 PATIENTS REGISTERED BUT RECEIVED NO SERVICES (SEE TABLE 2)
- 999 SCHEDULED STATION STOPS WERE MISSED (SEE TABLE 4, ITEM 12)
- 999 UNSCHEDULED STATION STOPS WERE MADE (SEE TABLE 4, ITEM 13)
- 99 PERSONNEL WERE SCHEDULED TO WORK IN THIS CLINIC (SEE TABLE 4, ITEM 1)
- 99 PERSONNEL WORKED IN THIS CLINIC (SEE TABLE 4, ITEM 2)
- 99:99 WAS THE DURATION OF THIS CLINIC - FIRST TO LAST PATIENT (HOURS:MINUTES)

95 %
 CONFIDENCE
 INTERVAL
 (+/-)

PATIENT ORIENTED DATA

- 999 % 99 PERCENT OF THE AVERAGE PATIENT'S TIME IN THE CLINIC WAS SPENT IN CONTACT WITH CLINIC PERSONNEL (SEE TABLE 2)
- 999 % 999 MINUTES WERE SPENT BY THE AVERAGE PATIENT IN CONTACT WITH CLINIC PERSONNEL (SEE TABLE 2)
- 999 % 999 MINUTES WERE SPENT BY THE AVERAGE PATIENT IN THE CLINIC (SEE TABLE 2)

PERSONNEL ORIENTED DATA

- 999 % 99 PERCENT OF PERSONNEL TIME AVAILABLE WAS SPENT SERVING PATIENTS (SEE TABLE 4, ITEM 7)
- 999 % 999 MINUTES OF PERSONNEL TIME WERE SPENT WITH THE AVERAGE PATIENT (SEE TABLE 4, ITEMS 5 and 9)
- 999 % 999 MINUTES OF PERSONNEL TIME WERE AVAILABLE PER PATIENT SERVED (SEE TABLE 4, ITEMS 3 and 9)
- 999 % 99 PERCENT OF AVAILABLE PERSONNEL TIME WAS CLERICAL (SEE TABLE 4, ITEM 4)
- 999 % 99 PERCENT OF PERSONNEL TIME SPENT WITH PATIENTS WAS CLERICAL (SEE TABLE 4, ITEM 6)

COST DATA

- 999 % \$ 99.99 WAS THE AVERAGE PERSONNEL COST FOR AN INITIAL VISIT (SEE TABLE 3)
- 999 % 99.99 WAS THE AVERAGE PERSONNEL COST FOR AN ANNUAL VISIT (SEE TABLE 3)
- 999 % 99.99 WAS THE AVERAGE PERSONNEL COST FOR A MEDICAL PROBLEM VISIT (SEE TABLE 3)
- 999 % 99.99 WAS THE AVERAGE PERSONNEL COST FOR A RESUPPLY VISIT (SEE TABLE 3)
- 999 % 99.99 WAS THE AVERAGE PERSONNEL COST FOR OTHER TYPES OF FAMILY PLANNING VISITS (SEE TABLE 3)
- 999 % 99.99 WAS THE AVERAGE PERSONNEL COST FOR NON-FAMILY PLANNING VISITS
- 999.99 WAS THE PERSONNEL COST TO BUDGET CODE A
- 999.99 WAS THE PERSONNEL COST TO BUDGET CODE B
- 999.99 WAS THE PERSONNEL COST TO BUDGET CODE C
- 999.99 WAS THE PERSONNEL COST TO BUDGET CODE D
- 999.99 WAS THE PERSONNEL COST TO BUDGET CODE E
- 9999.99 WAS THE TOTAL PERSONNEL COST FOR THIS CLINIC
- 999.99 WAS THE TOTAL TRAVEL COST FOR THIS CLINIC

SP

TABLE 1 ----- PATIENT TIME OF ARRIVAL IN THE CLINIC RELATIVE TO APPOINTMENT TIME (MINUTES)

	1	EARLY	1	ON TIME	1	LATE	11	PATIENTS WITH				
	1	> 45	1	16-45	1	+/- 15	1	16-45	1	> 45	11	APPOINTMENTS
FAMILY PLANNING	1	1	1	1	1	1	1	1	11			
NO. OF PATIENTS	1	99	1	99	1	99	1	99	1	99	11	999
PERCENT OF TOTAL	1	99 %	1	99 %	1	99 %	1	99 %	1	99 %	11	100 %
NON-FAMILY PLANNING	1	1	1	1	1	1	1	1	11			
NO. OF PATIENTS	1	99	1	99	1	99	1	99	1	99	11	999
PERCENT OF TOTAL	1	99 %	1	99 %	1	99 %	1	99 %	1	99 %	11	100 %

TABLE 2 ----- AVERAGE PATIENT TIME IN THE CLINIC 11 PATIENT TIME RECEIVING SERVICES (MINUTES)

VISIT TYPE	11	1	95 % CONF.	1	11	1	95 % CONF.	1	11	PERCENT	1	NUMBER OF								
	11	MEAN	1	INTERVAL	1	RANGE	11	MEAN	1	INTERVAL	1	RANGE	11	RECEIVING	1	PATIENTS				
	11	1	(+/-	1	MAX	1	MIN	11	1	(+/-)	1	MAX	1	MIN	11	SERVICES	1	NOT SERVED		
INITIAL	11	999	1	999 %	1	999	1	999	11	999	1	999 %	1	999	1	999	11	99 %	1	99
ANNUAL	11	999	1	999 %	1	999	1	999	11	999	1	999 %	1	999	1	999	11	99 %	1	99
MEDICAL	11	999	1	999 %	1	999	1	999	11	999	1	999 %	1	999	1	999	11	99 %	1	99
RESUPPLY	11	999	1	999 %	1	999	1	999	11	999	1	999 %	1	999	1	999	11	99 %	1	99
OTHER	11	999	1	999 %	1	999	1	999	11	999	1	999 %	1	999	1	999	11	99 %	1	99
TOTAL F P	11	999	1	999 %	1	999	1	999	11	999	1	999 %	1	999	1	999	11	99 %	1	99
NON-F P	11	999	1	999 %	1	999	1	999	11	999	1	999 %	1	999	1	999	11	99 %	1	99

TABLE 3 ----- NUMBER OF PATIENTS / COST PER PATIENT SERVED BY VISIT TYPE AND FAMILY PLANNING METHOD

VISIT TYPE	1	PILL	1	IUD	1	FOAM/CON	1	DIAPH.	1	OTHER	1	NONE	1	UNKNOWN	1	ALL METH	1	PTS. BY	1	WITH APPT
	1	NO/ \$	1	VIS. TP	1	BY VIS TP														
INITIAL	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99 %	1	99
ANNUAL	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99 %	1	99
MEDICAL	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99 %	1	99
RESUPPLY	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99 %	1	99
OTHER	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99/99.99	1	99 %	1	99
TOTAL F P	1	999	1	999	1	999	1	999	1	999	1	999	1	999	1	999	1	----	1	999
PERCENT BY	1	99 %	1	99 %	1	99 %	1	99 %	1	99 %	1	99 %	1	99 %	1	100 %	1	100 %	1	---

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TABLE 5 --- TIME (MINUTES) AND COST PER PATIENT SERVED BY TASK AND VISIT TYPE

TASK	VISIT TYPE	TIME WITH PATIENTS	95 % CONF. INTERVAL (+/-)	COST MEAN PER PATIENT	95 % CONF. INTERVAL (+/-)
XXXXXXXXXXXXXXXXXXXX	1 INITIAL	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %
	1 ANNUAL	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %
	1 MEDICAL	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %
	1 RESUPPLY	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %
	1 OTHER	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %
	1 NON-F P	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %
XXXXXXXXXXXXXXXXXXXX	1 INITIAL	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %
	1 ANNUAL	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %
	1 MEDICAL	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %
	1 RESUPPLY	1 9999 1 99	1 999 %	11 999.99	1 999 %
	1 OTHER	1 9999 1 99	1 999 %	11 999.99	1 999 %
	1 NON-F P	1 9999 1 99	1 999 %	11 999.99	1 999 %
	1 INITIAL	1 9	1 999 %	11 999.99 1 99.99	1 999 %
	1 ANN	1	1 999 %	11 999.99 1 99.99	1 999 %
	1	1	1 999 %	11 999.99 1 99.99	1 999 %
	1	1	1 999 %	11 999.99 1 99.99	1 999 %
ALL TASKS	1 INITIAL	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %
	1 ANNUAL	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %
	1 MEDICAL	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %
	1 RESUPPLY	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %
	1 OTHER	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %
	1 NON-F P	1 9999 1 99	1 999 %	11 999.99 1 99.99	1 999 %

CONTINUE FOR UP TO ELEVEN TASKS (DO NOT PRINT TASKS WITH NO DATA)

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