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24-Month Progress Report

THE TULANE/PRODEF OPERATIONS RESEARCH PROJECT  
IN BAS ZAIRE

(Contract AID/DSPE-C-0089)



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## I. Overview of the PRODEF Project

### A. Summary of the Design

As described in previous reports, the Tulane/CBZO project in Bas Zaire (known locally as the Programme d'Education Familiale or PRODEF) is intended to increase the availability and acceptability of modern contraceptives in both an urban and rural area of Bas Zaire, Republic of Zaire. The urban program is vertical (family planning only), whereas in the rural program, family planning (FP) is integrated with three interventions for children under five: anti-malarial drugs, anti-helminthic drugs, and rehydration salts (Oralyte).

The project is being implemented in the urban area of Matadi (estimated population of 150,000-200,000, of which approximately 133,000 are included in the target area for this project) and in the rural zone of Songololo (estimated population of 36,000; the program covers 53 villages with a total of approximately 25,000 inhabitants). As of 1 October 1982 the project had run 24 months.

The project is designed to test two alternative strategies to the delivery of FP services:

- (a) Treatment A: Stocking of existing dispensaries with contraceptives (and the other products in the rural area), as well as an extensive outreach program consisting of group meetings, home visiting and the household distribution of contraceptives; and
- (b) Treatment B: Stocking of existing dispensaries only, with no outreach activity.

Table 1  
Timetable of Project Activities to Date

ACTIVITY	1980		1981					1982																	
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
Finalization of design and subcontract	x	x																							
Baseline Survey:																									
- Design and pretest of instrument				x	x																				
- Training of interviewers				x																					
- Data collection in rural area					x	x	x	x																	
- Data collection in urban area																									
- Coding																									
- Key punching																									
Service Delivery:																									
- Recruitment and training of rural home visitors																									
- Training of rural dispensary nurses																									
- Stocking and (eventual) resupply of dispensaries in rural area																									
- Implementation of rural outreach program																									
- Recruitment and training of urban visitors																									
- Training of urban dispensary nurses																									
- Stocking and resupply of dispensaires in urban area																									
- Implementation of urban home visiting																									

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Maps of both areas, including the designation of Treatment Areas A and B, are shown in Figures 1 and 2.

In the rural area there is an additional source of supplies in certain villages: the matrone. This is a woman selected by the village to be trained by PRODEF and to serve as a depot for the contraceptive supplies and three drugs for children under five in those villages that do not have a dispensary (which is the case in 44 of the 53 villages). A complete list of the villages with a dispensary or matrone is given in Appendix A.

This is a service/research project, intended to increase the availability and acceptability of contraceptives; and to document the impact of increased availability on knowledge, attitudes and use of contraceptives. In addition, it will analyze the relative cost-effectiveness of Treatment A and B in achieving this objective.

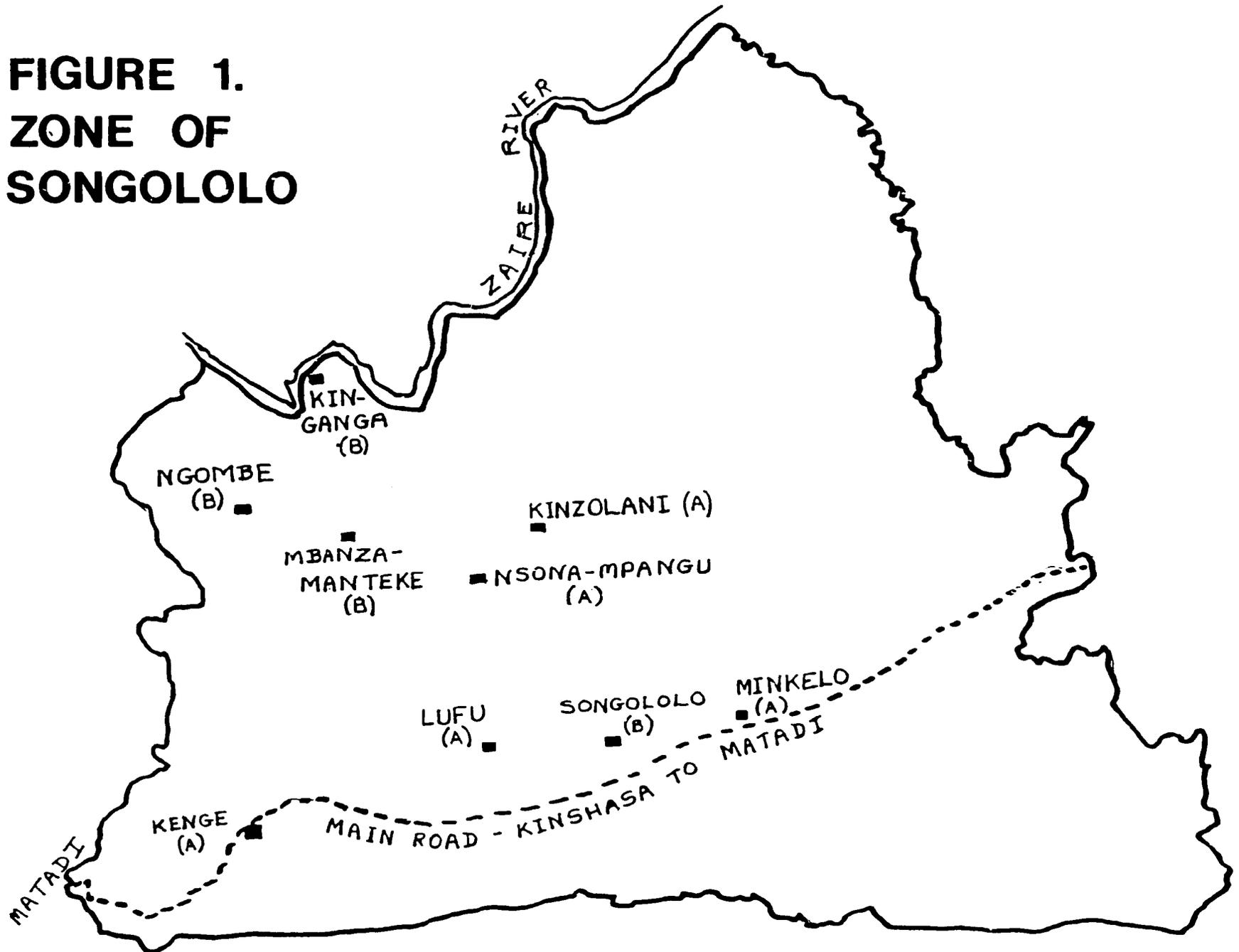
B. Timetable of Activities to Date

As shown in Table 1, the principal activities during the first year of this project were finalizing the project design and conducting the baseline survey in both areas. During the second year, most of the project activity has focused on the service program, including the training of home visitors, matrones and dispensary nurses; the stocking of dispensaries; and the initiation of home visiting and group meetings in both areas.

C. Project-Related Reports and Travel

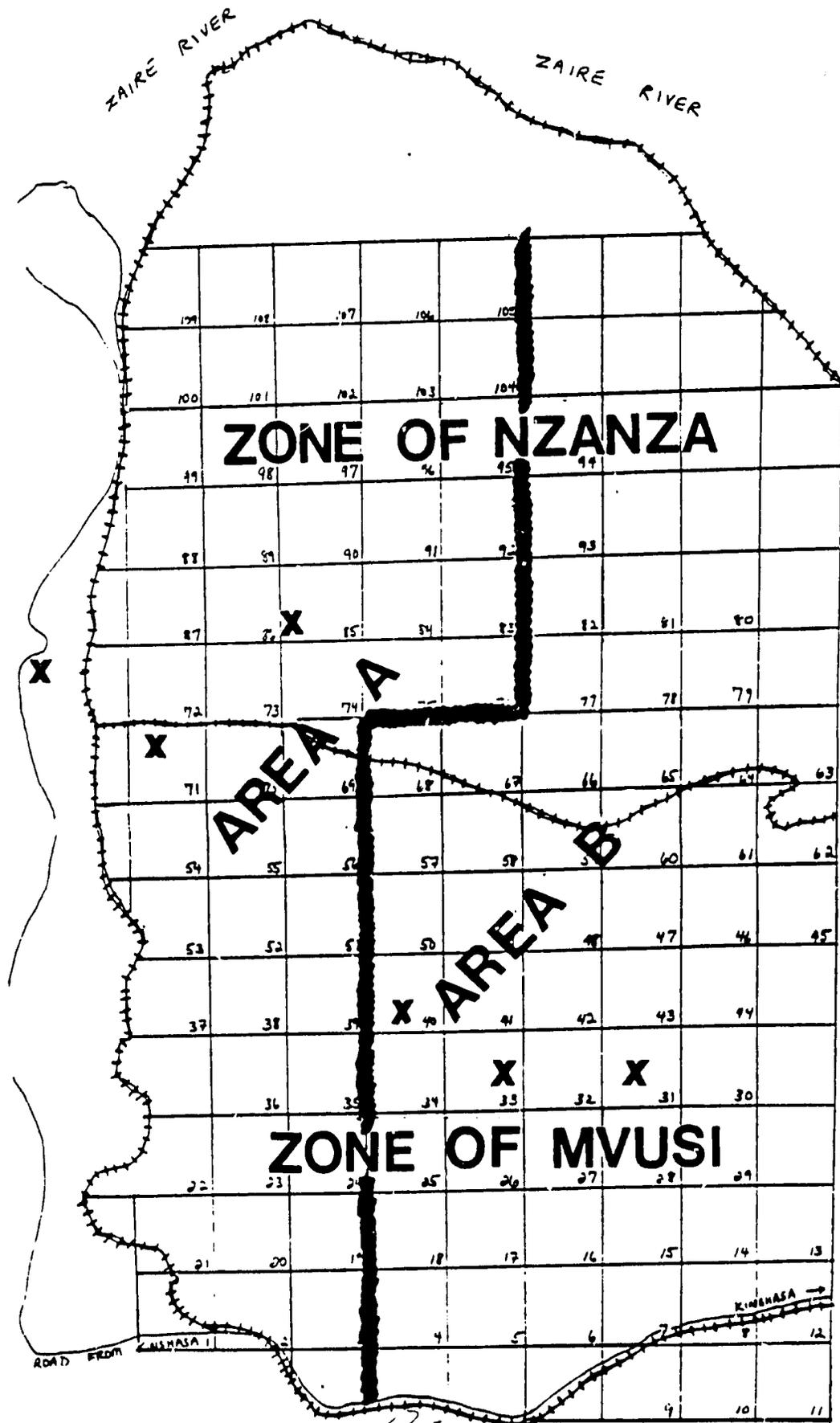
A list of the reports which have been written during Year 2 of this project is attached in Appendix B. This list also reflects the trips to Zaire made by Jane Bertrand, William Bertrand and Maria Wawer during this period.

**FIGURE 1.**  
**ZONE OF**  
**SONGOLOLO**



Za

# FIG. 2 CITY OF MATADI



## II. Research Aspects of the Project

### A. The Baseline Survey

Analysis of the baseline survey is in progress at Tulane and preliminary results became available in November 1982. The report, "Results of the PRODEF/Tulane Survey in Bas Zaire. Part I. Population Characteristics, Reproductive Ideals, and Fertility Control," is being translated and a French version should be available by January 1983. Copies of either the English or French translation can be obtained from Tulane University.

Part II of the results (forthcoming) will focus on the health and nutritional status of the children under five in the study area. This should be available by early 1983 and will also be translated to French.

### B. Service Statistics and Cost-Effectiveness

The forms developed in collaboration with Johns Hopkins University to monitor program performance and obtain the necessary data for the eventual cost-effectiveness analysis are now in routine use. The type of information which these forms provide is reflected in the description of the service project, below.

In preparation for the eventual cost-effectiveness analysis, all cost data are being classified by type of expense and entered on the computer for future use. Dr. Mark McBride of Tulane University is providing technical assistance with regard to the cost-effectiveness analysis.

### III. Results to Date of Service Delivery

Service delivery to date has consisted of stocking all dispensaries in the project with contraceptives, including the pill, Neo-Sampon, foam and condoms (in the urban and rural area) and three products for children under five: chloroquine, mebendazole, and Oralyte (in the rural area only). In addition, home visiting (including the household distribution of contraceptives) has been in progress for one year in the rural area and four months in the urban area (as of October 1982).

In the rural area, the home visiting was preceded by a group meeting in each village during the first two rounds; in the urban area, the group meetings are programmed to begin shortly. The urban team is now on its second round of home visiting, the rural team on its third (and final) round.

#### A. Acceptance of the Household Distribution of Contraceptives

Given the relative nonavailability of modern contraceptive methods in the target population prior to the PRODEF project and the widespread practice of having large families, there was some question as to how this project would be accepted.

The results to date have been promising. In the rural area, the team of home visitors has been welcomed in every village visited. While there may be individuals in the village opposed to FP, there has been no case in which the program has caused any major controversy at the community level.

In the urban area, there was some initial resistance to the program, not from the community but rather from certain well-placed individuals who perceived that their economic interests might be threatened. The project was finally implemented despite this

Table 2

Acceptance of Modern Contraceptives During Round #1 in Both Areas

	<u>Urban</u>	<u>Rural</u>
Number of women 15-49 visited	6,057	1,994
Number that accepted a modern contraceptive	2,260	485
Percentage of women that accepted a modern contraceptive (based on the total visited)	37%	24%

obstacle, and the resistance has all but disappeared. At the community level, the visitors have generally been well received, and there are very few women in the population who have refused the visit.

As expected, acceptance of the contraceptive methods is somewhat higher in the urban than rural area. In Matadi 37 percent of the women visited (15 to 49 years old) accepted the free sample of contraceptives during Round #1, compared to 24 percent in the rural area; see Table 2.

B. Preference of Method

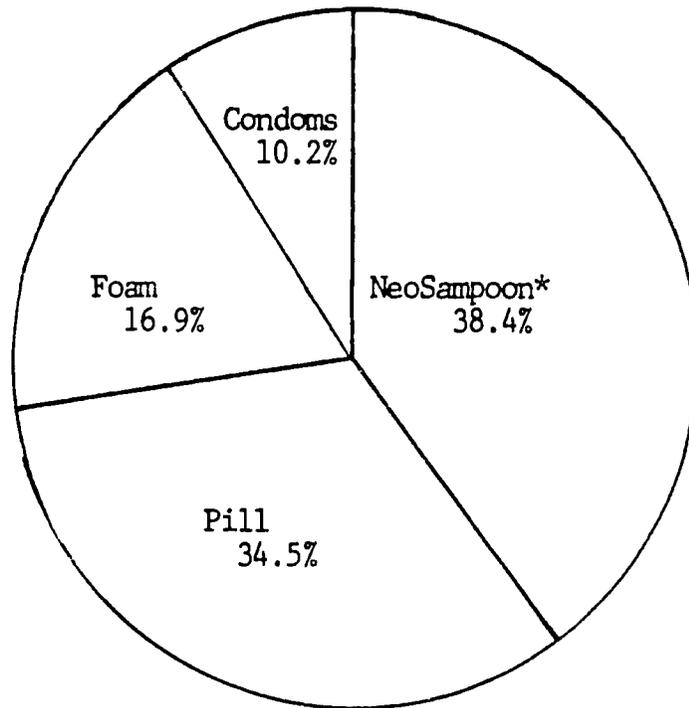
In the urban area, the most popular methods during Round #1 were Neo-Sampon (38 percent) and the pill (35 percent), followed by foam (17 percent) and condoms (10 percent). By contrast, in the rural area over half the women (58 percent) accepted foam, followed by condoms (23 percent) and the pill (19 percent); see Figure 3.

There are two factors which account for much of the difference in method preference between the urban and rural area. During Round #1 in the rural area, the home visitors were advised not to give the pill to lactating women (who comprise a large number of those interested in FP). Also Neo-Sampon was not yet available. However, by the time Round #1 started in the urban area, the policy had been changed to allow lactating women to have the pill from the fourth month on, and Neo-Sampon became available.

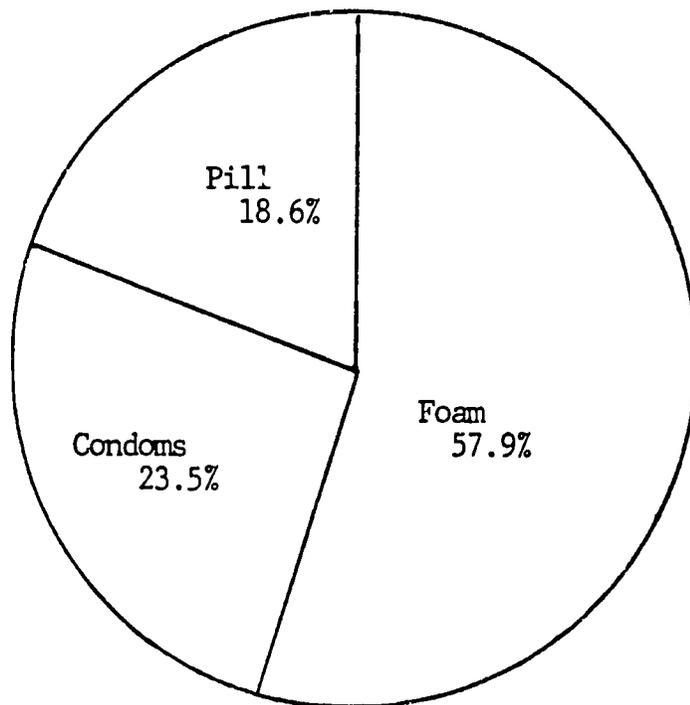
C. Reasons for Not Accepting Free Contraceptives

Sixty-three (63) percent of the urban population and 76 percent of the rural population did not accept a free contraceptive. As

URBAN



RURAL



\* Note: NeoSampoon was not available in the rural area during Round #1.

Figure 3. Preference for methods among acceptors in Round #1, both areas.

Table 3

Reason for Not Accepting a Contraceptive Method During Round 1 in Both Areas

	<u>Urban</u> (n = 3428)	<u>Rural</u> (n = 1130)
Husband absent at time of the visit*	25.9	25.8
Woman is currently pregnant	16.0	21.9
Woman is opposed to FP	15.9	8.7
Woman is infertile or subfecund	9.4	----
Woman has reached menopause	7.9	3.3
Couple is already using a method	6.4	----
Woman desires pregnancy	6.0	9.6
Husband opposed to FP	5.8	2.3
Parents opposed to FP (for their daughter)	2.9	----
Parents absent (in case of young girls)	2.0	----
Fear of side effects	1.1	----
Other	----	28.4**
	100.0	100.0

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\* The visitors are not authorized to leave contraceptives with the woman if her husband is not present to take part in the decision.

\*\* In the rural area, this includes subfecundity, no exposure to intercourse, preference for traditional methods, and other.

shown in Table 3, the primary reason for this in both areas was that the women were "ineligible" because their husbands were not present to give their consent. (This policy of requiring the consent of both spouses was taken as a precautionary measure at the beginning of the home visiting to avoid giving the impression that PRODEF was promoting promiscuity.)

The second reason in both cases was that the woman was already pregnant. In Round #1 in the rural area, this also made her ineligible. However, by Round #1 in the urban area, the visitors were authorized to leave a method to be used after delivery, if the woman were interested.

Disapproval of FP was the third-most common reason for not accepting a method in the urban area, while the percentage giving this answer in the rural area was lower.

Other reasons included infertility/subfecundity, menopause, desire for pregnancy, and opposition of the husband to FP. In Matadi, parental permission was required to talk to unmarried teens; thus, opposition of the parents or their absence at the time of the visit were additional reasons for nonacceptance.

Surprisingly few women in either area mentioned fear of side effects as a reason for not accepting contraceptives. Anecdotal comments from the urban home visitors suggest that this may become more of a problem in Round #2.

D. Trial and Continued Use of the Contraceptives Distributed During Round #1

It is widely recognized that a woman may accept a free contraceptive but never use it or discontinue to use it. Table 4

Table 4

Trial and Continued Use of the Contraceptives Distributed During Round #1: Rural Area

Method	Round #1		Round #2					
	No. of women that accepted	No. of previous acceptors found at home and again visited	Had tried the method		Was still using the method		Still had the coupon	
			n	%	n	%	n	%
Foam	281	180	139	77%	92	51%	154	86%
Condoms	114	74	65	88%	46	62%	57	77%
Pill	90	48	35	73%	18	38%	36	75%
<b>TOTAL All Methods</b>	485	302	239	79%	156	52%	247	82%

provides data which indicate the extent to which women who accepted a method in Round #1 had ever used it and/or were still using it in Round #2 (approximately six months later). (Similar data are not yet available for the urban area since Round #2 is still underway there.)

Overall, 79 percent of the rural acceptors in Round #1 who were revisited in Round #2 had ever tried the method and 52 percent were still using it at the time of Round #2. Continuation was highest among those women who had accepted condoms, followed by foam and the pill.

A total of 82 percent of the previous acceptors still had their coupon, indicating that they had not yet gotten resupplied from a dispensary or matrone. Among these, a number of women redeemed their coupon with the home visitor. This somewhat defeated the purpose of the coupon as a means of linking the woman to an existing service outlet, but it was done to encourage continued use of the method.

E. Relative Effectiveness of Service Outlets in Distributing Products: Rural Area

Although the inventory of products distributed to members of the target population is not totally complete and up-to-date, the preliminary data (see Table 5) are of interest in several respects.

First, data on the volume of contraceptives versus the quantity of drugs for children under 5 being distributed indicate that the MCH aspect of this project responds more directly to the felt needs of the rural population than do the contraceptives. This is true of

Table 5

Contraceptives and Drugs Distributed in the Rural Area by Service Outlet<sup>1</sup>

<u>Contraceptives</u>	<u>Home Visitors</u>	<u>Dispensaries</u>	<u>Matrones</u>	<u>Total</u>
Pill (cycle)	182	176	687	1,045
Foam (can)	413	75	191	679
NeoSampooon (tube)	25	31	132	188
Condom (dozen)	265	74	265	604
<u>Drugs</u>				
Aspirin (tablet)	4,105	5,542	20,652	30,299
Oralyte (packet)	608	334	896	1,838
Chloroquine (tablet)	3,112	2,025	14,506	19,643
Mebendazole (tablet)	3,716	2,016	3,580	9,312

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<sup>1</sup> These figures represent the first year of service delivery, from October 1981 to October 1982. They somewhat underestimate the true number, since not all dispensaries and matrones have been inventoried recently.

all three service outlets: the home visitors, the dispensaries and the matrones.

Second, while contraceptive sales are low, it is promising that the dispensaries and matrones (combined) have done a higher volume of business (much of it on a paying basis) than the home visitors (who deliver most of their contraceptives free of charge<sup>1</sup>). This is important because these will be the only service outlets available at the termination of home visiting in the rural area (in late February 1983). Moreover, the volume of the drugs sold for children under five suggests that these locations are accessible to the target population if there is sufficient motivation to use them.

F. Efficiency and Effectiveness of the Home Visitors

While it is still premature to do any cost-effectiveness analysis on this project, there are several indicators of efficiency and effectiveness which can now be examined.

One very basic indicator is the number of days per month which the home visitors work. Data in Table 6 provide a sharp contrast between the urban and rural team. In the urban area, the team has been in the field every working day since they began in late June (with the exception of October, when they finished Round #1 and underwent refresher training). This yields the expected 20+ days a month.

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<sup>1</sup> The exception would be a woman who had already redeemed her free coupon and was interested in purchasing more.

Table 6  
Average Number of Completed Visits per Visitor per Day Worked in Both Areas

Month	URBAN AREA				RURAL AREA			
	No. of days worked during month	No. man/days worked	No. of completed visits	Average no. of visits per worker per day	No. of days worked during month	No. man/days worked	No. of completed visits	Average no. of visits per worker per day
1982*								
Jan	---	---	---	---	8	31	311	10.0
Feb	---	---	---	---	12	48	290	6.0
Mar	---	---	---	---	6	30	123	4.1
Apr	---	---	---	---	6	28	111	3.9
May	---	---	---	---	14	56	360	6.4
Jun	1	8	76	9.5	21	84	599	7.1
Jul	22	151	1,821	9.5	(vacation)	---	---	---
Aug	21	177	1,748	9.9	7	28	215	7.7
Sep	21	172	1,532	8.9	(no vehicle)	---	---	---
Oct	16	107	827	7.7	4	16	100	6.3
Total	81	655	6,004	9.2	78	321	2,109	6.6

\* Although the rural team began home visiting in October 1981, this table includes only data for 1982.

In the rural area, it was expected that the team would work only 15 days a month, given that the conditions and travel are more difficult, the hours longer, etc. However, the average number is well below this, including a number of months in 1982 when the rural team worked only one week/month.

There are several reasons for this. First, the rural team must have use of a vehicle to be able to go out to the villages to work. During the past six months there has been a severe fuel crisis in Zaire, such that it is hard to obtain fuel and people are reluctant to use the limited supply they are able to obtain. In fact, this was at the root of the problem in September, when the team was totally immobilized.

Second, with the initiation of service delivery activities in Matadi, much of the supervision has been diverted to that area in recent months. Also, since the project had only one vehicle, it was often used to go to Matadi, leaving the rural team idle.

Third, in the effort to get other aspects of the project moving, the directors (both on the Tulane and PRODEF side) failed to recognize this problem earlier and try to find a solution. As it is, the team will complete the necessary three rounds of visits in the 18 month period. However, the team has been used inefficiently, and this represents a significant budgetary item.

The solution to this problem is to try and finish the third round of visiting in the rural area as soon as possible (February 1983), at which time the home visitors will go off the payroll. At the same time, efforts will be made to reinforce the resupply

mechanism via the dispensaries and matrones, in an effort to sustain interest in family planning.

Several other aspects of efficiency and effectiveness have been examined with respect to the urban team, in an effort to evaluate individual as well as team performance. As the data in Table 7 indicate, the team as a whole visited 64 percent of the houses in Area A (the part of Matadi designated to receive the full outreach program). This ranged from a low of 45 percent to a high of 74 percent for the different visitors. Reasons for not visiting a house included (a) uninhabited, (b) no one at home, or (c) visit refused.

The average number of visits per hour for the urban team was 1.9, ranging from 1.1 (for a visitor who worked only one month before leaving) to 2.4 visits/hour.

As mentioned above and shown in Table 2, 37 percent of the women who were visited in the urban area accepted a contraceptive method. This percentage ranged from 21 percent to 55 percent among the different visitors. In addition, 4 percent of the women visited were given a referral for an IUD, DepoProvera or female sterilization.

#### G. Performance of the Matrones

The matrones were not even mentioned in the original design of this project. Indeed, they were an afterthought and were incorporated into the project design when it became evident that dispensaries would be difficult for a substantial portion of the target population.

Table 7  
Relative Effectiveness of Urban Home Visitors  
in terms of Coverage and Acceptance of Contraceptives:  
Round #1

	V I S I T O R										:	T O T A L
	1	2	3	4	5	6	7	8	9	10		
Coverage:												
Number of houses in section	725	782	685	580	781	532	491	49	696	613	:	5,934
Percentage visited*	62%	65%	65%	74%	52%	73%	66%	45%	56%	73%	:	64%
Average number of visits per hour	1.6	1.6	1.8	2.2	1.8	1.8	1.7	1.1	2.4	1.6	:	1.9%
Acceptance of Contraceptives:												
Number of women 15-49 who were visited	649	885	749	611	679	602	575	23	630	668	:	6,057
Percentage that accepted:												
A modern method (pill, NeoSampoon, foam, condoms)	53%	31%	40%	37%	55%	22%	21%	35%	42%	32%	:	37%
A referral** (for IUD, sterilization, or DepoProvera)	3%	3%	4%	6%	4%	1%	3%	0%	2%	6%	:	4%

\* The primary reasons for not visiting a house were that no one was at home, even after two call-backs, or the house was uninhabited.

\*\* These percentages include both women who wanted a referral only and those who accepted a method in the interim (the latter are also classified above as acceptors).

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To date there is little "hard data" on the performance of the matrones, except for their records of the amounts of contraceptives and drugs for children under five distributed. However, it is our subjective impression that the matrones will emerge as one of the more successful aspects of the rural project. These women have the confidence of their communities; they appear to enjoy their participation in the project; and to date they have distributed a substantial quantity of supplies. Moreover, their cost to the project is minimal. (They receive 50 percent of all sales they make, but no additional salary or bonus.)

It is interesting that when the project was first conceived, it was felt that community-based distribution by nonmedical personnel would be unacceptable in these rural communities. The matrone system evolved in response to the problem of accessibility to services, and it now represents a useful model for future CBD efforts in Zaire and possibly other francophone subSaharan countries.

#### IV. Problems Encountered in the Past Six Months

##### A. Fuel Shortage

This has been a nationwide problem and threatens to paralyze many activities in Zaire. PRODEF has been creative in finding means of obtaining fuel, but this has required a considerable investment of time and energy. Also, it has delayed project activity, especially in the rural area.

B. Under-utilization of Rural Team

This has resulted in part from the fuel shortage/lack of vehicle, in part from the fact that attention was diverted to the urban program, and in part from oversight of project directors (both in Zaire and at Tulane). Efforts will be made to finish the home visiting in the rural area as soon as possible, to avoid a continuation of this situation.

C. Family Planning Services in the Matadi Dispensaries

Whereas PRODEF has direct control over the home visitors, the dispensary nurses (paid by the state or private organizations) are not employees of the project and have less identification with its objectives.

Dr. Richard Brown of USAID/Zaire recently visited the project in Matadi and made the observation that while the home visiting was going well, the ultimate success of the project would depend on the existing service outlets. In response to this problem, PRODEF plans to incorporate additional dispensaries into the project and conduct refresher courses for the personnel of the dispensaries currently participating in the project.

D. Limited Availability of IUDs and Female Sterilization

This is a problem in both areas. In Matadi, there is only one dispensary equipped for IUD insertion, and the procedures for referring women for female sterilization need further attention. In the rural area, these services are provided at the Hôpital Evangélique de Nsona Mpangu. However, with the recent gas shortage and alternative demands on Dr. Nlandu's time, there has been little activity in this area.

V. Project Activity During the Upcoming Year

The major activities for 1983 will be:

1. To strengthen the dispensary/matrone system in the rural area, in part through refresher training.
2. To carry out the follow-up survey at the close of the home visiting in the rural area.
3. To continue Round #2 and begin Round #3 of home visiting in the urban area.
4. To initiate group meetings in the urban area.
5. To increase the number of dispensaries and improve the quality of service given at the Matadi dispensaries.
6. To participate in the filming, editing and narration of a 16 mm film on family planning to be produced in collaboration with RATALESCO.

APPENDIX A

Villages Included in the Project

A. Area A (Outreach and Stocking of Service Outlets)

	<u>Source of Service</u> <sup>1</sup>
<u>Nsona Mpangu</u>	H
<u>Bete</u>	M
Ndemba	M
Kumbi	M
Mbata Bonde	M
Landango	M
Matombe	M
Mansonso	M
Kitombadio	N
Ecole Primaire-Lunionzo	None (Small village close to two others)
Kisende	M
Lundu	M
<u>Lufu</u>	D
<u>Mazonzi</u>	M
Kongo-Songololo	M
Nkamuna	M
Vemadiya Km 70	None (Refused to send matrone for training)
Mavumba I	M
<u>Kenge</u>	D
<u>Pompage</u>	M
Kimeza	M
Kitadila	M
Nlamba	None (No candidate available)
<u>Minkelo</u>	D
<u>Lumueno</u>	M
Nionga	M
Kiombia	M
Kimfinda	M
<u>Kinzolani</u>	D
Kiesa Kiayenga	M
Kinsala	M
Nsonso	M
Mbinda	M

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<sup>1</sup> H = hospital, D = dispensary, M = matrone

B. Area B (Stocking of Service Outlets Only)

	<u>Source of Service</u> <sup>1</sup>
<u>Songololo</u>	D
Livitulu	None (Small village near dispensary)
Kimbala Zolele	None (Refused to send matrone for training)
Kinganga	D
Kintoto	M
Nsumbi	M
<u>Mbanza-Manteke</u>	D
Tendele	M
Vunda	None (Small village)
Ntonbo Lukuti	M
Kimpevolo	M
Nlambazi	M
Nsilu	None (Near dispensary)
<u>Ngombe</u>	D
Kemba	None (Near dispensary)
Mpumba	M
Mbata-Kinenga	None (No candidate available)
Kimbembo	M
Mativa	M
Inga II	M

\* \* \*

SUMMARY

	<u>Area A</u>	<u>Area B</u>	<u>T O T A L</u>
Number of Villages	33	20	53
Number of Dispensaries	5	4	9
Number of Matrones	25	10	35
Number with No Service Outlet	3	6	9

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<sup>1</sup> H = hospital, D = dispensary, M = matrone

APPENDIX B

Project Reports Issued During Year II of the Project

<u>DATE</u>	<u>AUTHOR</u>	<u>TITLE</u>
12/2/81	Jane T. Bertrand	Field Activities in Bas Zaire One Year Into the Project. Trip Report: Zaire, Nov. 11-30, 1981.
4/26/81	Jane T. Bertrand	PRODEF: The Bas Zaire Family Planning Project. April 1981. Trip Report: April 8-23, 1982.
4/30/82	Jane T. Bertrand	Zaire Family Planning Operations Research Project: 18-Month Progress Report.
July 1982	Jane T. Bertrand	Bas-Zaire Family Planning Project. Trip Report: July 7-28, 1982.
July 1982	William E. Bertrand	Trip Report: July 1982.
9/2/82	Elizabeth Maguire	Trip Report: Zaire, July 9-17, 1982
Sept 1982	Maria Wawer	Trip Report: PRODEF Family Planning and Health Project. Bas Zaire, Zaire. August 22-September 1, 1982.
November 1982	PRODEF and Tulane	Results of the PRODEF/Tulane Survey in Bas Zaire. Part I. Population Characteristics, Reproductive Ideals and Fertility Control.