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# CONTRACEPTIVE PREVALENCE SURVEYS

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FAMILY PLANNING SERVICES IN RURAL TUNISIA:  
A CASE STUDY

BY

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## I. INTRODUCTION

The small North African Republic of Tunisia is often cited as one of the leaders among developing world countries in terms of its strong population policy and comprehensive, well-balanced family planning program. Two decades ago, long before other Arab and African nations, Tunisia began incorporating demographic variables into its development plans and creating the political, religious and legislative framework for national family planning program. An extraordinary series of laws were promulgated which promote full equality of women, encourage small family size and permit free access to all major methods of contraception. Family planning in Tunisia received a major boost in 1973 with the creation of the National Family Planning and Population Office (ONPFP). Under the direction of this agency, family planning services have steadily expanded to over 900 facilities nationwide, supported by a broad range of information and education activities, training, and research and evaluation.

Recent surveys and studies of the Tunisian family planning program (Maguire, 1980; ONPEP, 1981) provide indicators of program achievements over the past eight years. Nine out of ten ever-married women have heard about family planning, according to the 1978 National Fertility Survey, and 43 percent have used a contraceptive method at least once. Modern contraceptive prevalence rates have tripled since 1973 to a current estimated level of 25 percent. The increase in numbers of married women practicing family planning has been accompanied by a steady decline in the crude birth rate which, in 1981, reached 33 per 1,000, lower than any other country in the region.

Despite substantial progress in reducing fertility levels, Tunisia's current population of 6.6 million is growing at an annual rate of 2.5 percent. Much more remains to be done if new demographic targets are to be met. A close examination of national family planning program performance reveals a serious imbalance in contraceptive acceptance and use between urban and rural areas. Half of all married women of reproductive age (MwRA) live in rural areas yet they only represent one-third of ONPFP program acceptors.

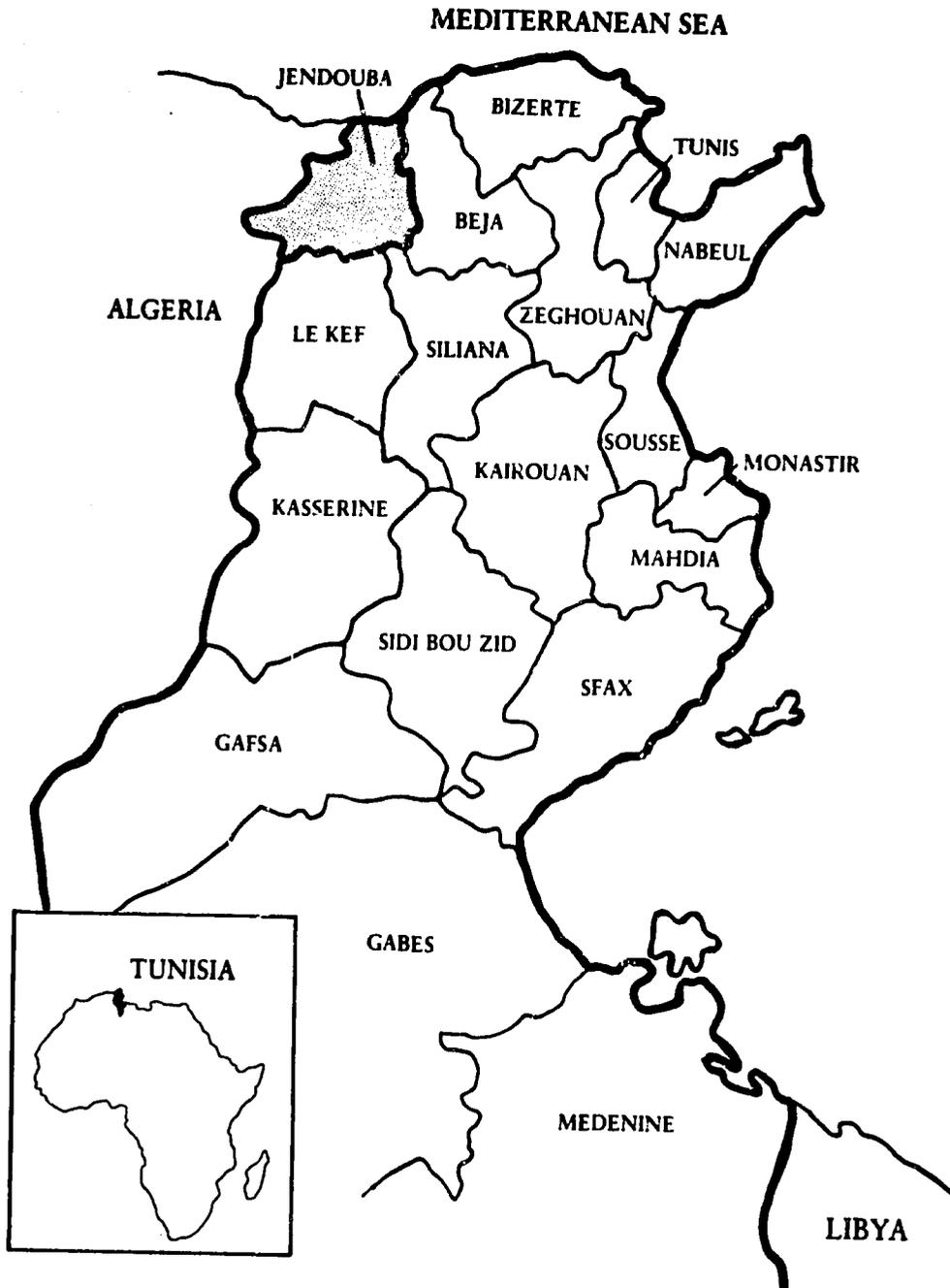
The barriers to family planning service delivery in rural Tunisia are enormous: a semi-literate and widely dispersed population, rugged terrain, a sparse network of roads and weak health infrastructure. Since the mid-1970's, there have been a number of pilot projects--household and community-based--aimed at overcoming these obstacles and providing rural families with greatly improved access to family planning and maternal-child health (FP/MCH) services. One of the most comprehensive and best documented of these experiments in rural service delivery is the PFPC project, implemented during 1977-1979 in the governorate of Jendouba, one of Tunisia's 20 provinces.

This paper presents the findings of the PFPC household contraceptive distribution project, the largest operations research activity undertaken to date by the ONPEP with financial and technical assistance from AID. The sections which follow examine the setting, study design, project impact as well as implications for the national family planning program. Results of the 1979 contraceptive prevalence survey (CPS) in Jendouba governorate highlight current unmet demand for family planning and continued inaccessibility of services--problems confronting all of rural Tunisia and critical issues for the Tunisian family planning program in the future.

## II. SETTING

Jendouba governorate is located in the northwestern corner of Tunisia, bordered by Algeria on the West and the Mediterranean on the North (Figure 1). One of the smallest of Tunisia's 20 governorates, Jendouba has 5 percent of the country's inhabitants and a population density much higher than the national average. Over one-third of the area is covered by the Khroumirie mountain range; large sections are heavily wooded and often inaccessible, particularly during winter months. Extending across most of the rest of the governorate are the fertile plains of the Medjerda river where wheat and other cereal crops are grown, the principal economic activity of the region.

**FIGURE 1**  
**Administrative Map of Tunisia**



**NOTE:** The governorates of Tozeur and Tataouine are not indicated on this map.

**SOURCE:** Recensement général de la population de mai 1975, INS, République Tunisienne, Vol. III.

The population of Jendouba governorate is overwhelmingly rural and widely dispersed. Eighty-three percent live in settlements of under 2500 inhabitants and of this number, approximately half are in "isolated" areas (under 50 inhabitants). The most recent census data showed Jendouba with a total population in 1975 of 299,702, including 39,123 married women of reproductive age. The estimated crude birth rate at that time was 32.6 per 1,000 and the rate of natural increase, 2.3 percent. Fifty-six percent of the population is under age 20, and the area has experienced high rates of unemployment and outmigration.

Despite its very rural character, Jendouba has had a particularly active family planning program; educational activities and contraceptive services have been available in some areas since 1970. The governorate has been the focus of a number of pilot family planning activities, including a household family planning educational campaign in the town of Jendouba during 1971-1972, followed by a governorate-wide female sterilization campaign the next year. In 1973, one-quarter of all tubal ligations recorded in the country were performed in Jendouba.

Apart from these experimental efforts, the organization of family planning services in Jendouba is the same as in other governorates. There is a regional education and family planning center (CREFP) in the provincial capital. In addition, the CREPF has three mobile teams which provide family planning counselling and contraceptives at designated locations (generally dispensaries) in each of the governorate's six delegations (counties). Family planning services are also available through the Ministry of Public Health (MOPH) infrastructure; tubal ligations are performed at the regional hospital in the capital and other services can be obtained at auxiliary hospitals, maternal and child health (MCH) centers and dispensaries throughout the governorate. The number and quality of these facilities varies substantially among the delegations, with the greatest deficiencies found in the more geographically isolated areas. In Jendouba, as elsewhere in rural Tunisia, there is a wide gap between knowledge and actual use of different family planning methods; the major underlying factor is availability and accessibility of services.

### III. STUDY DESIGN

#### Project Objectives

In an effort to overcome existing barriers to family planning practice, an experimental project was launched in early 1977 in Jendouba governate which focused on making contraceptive information and services available for the first time at the household level. The project, directed by the ONPFP with financial and technical assistance from AID, was given the name "Le Planning Familial Par le Couple en Milieu Rural (PFPC)" (Family Planning for Couples in Rural Areas). The stated purpose of the PFPC was to "assist the Tunisian government to develop a cost-effective family planning delivery system with the potential for replication on a national scale." (ONPFP, 1981)

The basic model was taken from the PFAD demonstration project, the first household contraceptive distribution experiment in Tunisia, launched in 1976 in Bir Ali Ben Khalifa, a delegation of 30,000 inhabitants in Sfax governorate (PFAD, 1979). In comparison with PFAD, the PFPC experiment in Jendouba had a target population five times as large (144,000), a broader contraceptive mix, greatly simplified service forms and significantly reduced personnel and administrative costs. Moreover, under this expanded operations research project, there was an opportunity to examine for the first time certain key program issues including: the minimum number of family planning distributors needed to assure maximum coverage of the eligible population, the appropriate mix of interventions, the effectiveness of one versus two household visits, the relative impact of a family planning only delivery system versus an integrated FP/MCH system and the feasibility and acceptability of different contraceptive resupply mechanisms.

#### Study Population

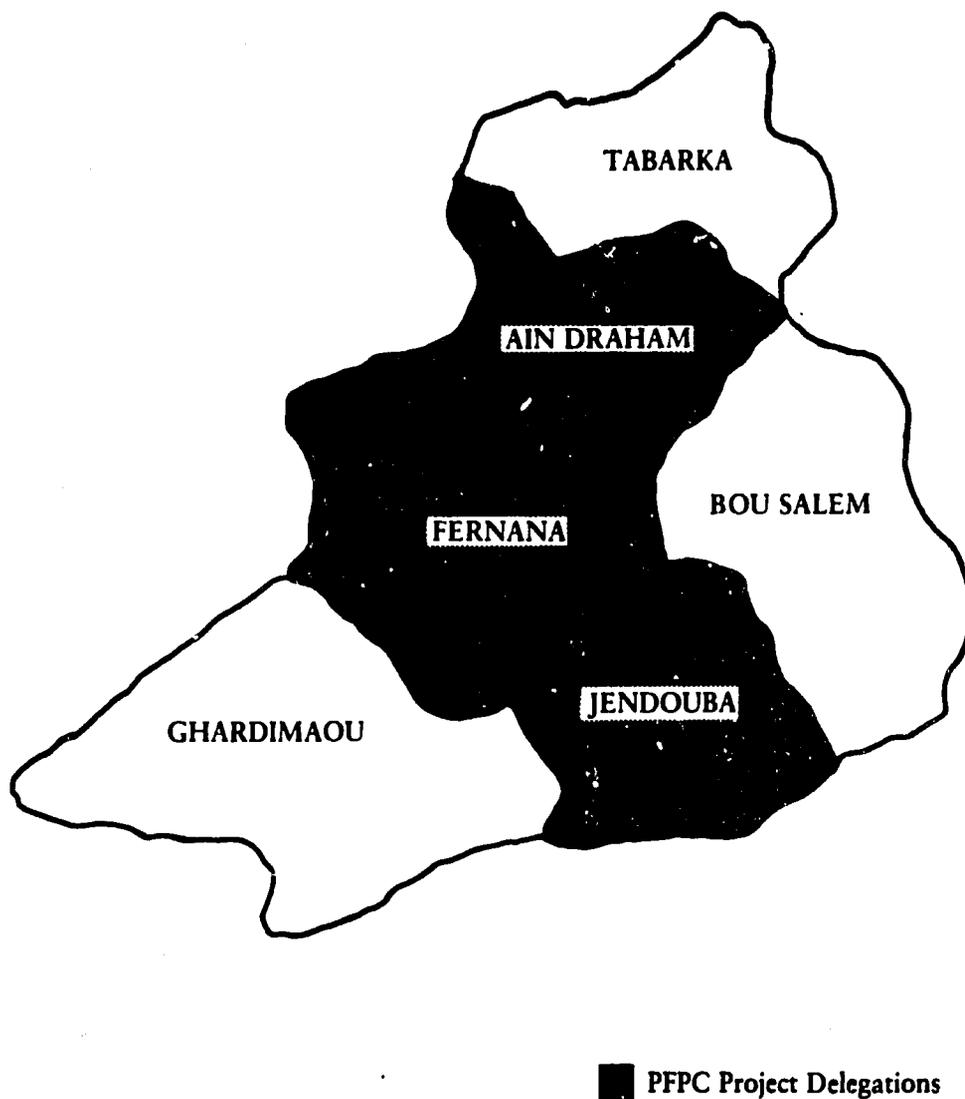
Three of the governorate's six delegations - Fernana, Jendouba and Ain Draham - were selected as experimental areas (Pop. 144,000) and the remaining three - Ghardimaou, Bou Salem and Tabarka - as controls (Figure

Table 2

## SELECTED DEMOGRAPHIC AND HEALTH INDICATORS FOR JENDOUBA GOVERNORATE

	Experimental Areas				Control Areas				Total
	Fernana	Jendouba	Ain Draham	Subtotal	Bou Salem	Ghardimaou	Tabarka	Subtotal	
<u>Demographic Indicators (1975)</u>									
Total Population	41,80	68,149	34,057	144,008	65,430	58,576	31,688	155,694	299,702
MWRA 15-44	5,105	9,318	4,304	18,727	8,657	7,735	4,004	20,396	39,123
Total Households	7,466	11,740	6,230	25,436	10,997	7,466	5,831	24,294	49,370
Percent Rural	97	73	88	84	87	75	90	87	83
Percent in Clusters	64	34	72	52	32	12	70	36	41
Percent Isolated	33	39	16	32	55	63	20	51	42
Area (in Km <sup>2</sup> )	419	503	503	1,425	589	702	386	1,677	3,102
Density (population/Km <sup>2</sup> )	100	135	68	101	111	83	82	93	97
<u>Health Indicators (1977)</u>									
Regional Hospital		1		1					1
Auxiliary Hospitals			1	1	1	1	1	3	4
Maternal and Child Health Centers		1	1	2	1	1	1	3	5
Dispensaries	2	8	3	13	3	3	5	11	24
Meeting Places	28	36	26	90	45	34	25	104	194

**FIGURE 2**  
**Administrative Map of the Governorate of Tunisia**



**SOURCE:** Population du gouvernorat de Jendouba: caractéristiques sociodémographiques, ONPFP, République Tunisienne, mars, 1979, p. 5.

2). In both Fernana and Ain Draham, the terrain is mountainous, rocky and heavily wooded; the roads are for the most part dirt tracks. The educational and health infrastructure is woefully inadequate and residents had little access to family planning services prior to the PFPC project. Fernana is the most underserved delegation in the governorate. In contrast, Jendouba delegation, which lies in the fertile plain, has a substantially improved transportation network and a greater number of schools and health facilities. It is the site of the regional family planning center and hospital and much of the early family planning activity in the governorate.

Among the control areas, Bou Salem is similar to Jendouba delegation in terms of terrain, level of economic activity, health and educational infrastructure. Although it has more health centers, Ghardimaou shares some of the same features as Fernana; part of the area is mountainous and a high proportion of the population is geographically isolated. Tabarka has an infrastructure and level of family planning activity similar to Ain Draham. Selected demographic and other indicators for the six delegations are presented in Table 1.

### Research Design

#### Delivery System

The research design in each of the three delegations involved an initial canvass by the PFPC team<sup>1</sup> of all households (except those considered too isolated) to identify married women aged 15-44 (WRA). All eligible<sup>2</sup>

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1. Five single lay women (aged 19-23) locally recruited and given two weeks intensive training. Team members were salaried but positions were not permanent.

2. Married, living with husband, not currently pregnant or lactating (less than 6 months post-partum), fecund, not using an IUD and with no medical contraindications.

women were offered family planning information as well as free supplies of contraceptives or referral for surgical methods. Those who were interested and had no contraindications were provided oral contraceptives (6 cycles) or if they preferred, condoms or foam. IUD candidates were referred to the nearest dispensary, clinic or regional family planning center. Women requesting a sterilization were sent to the regional hospital in Jendouba.

As detailed in Table 2, modifications in service delivery were introduced in each of the three study areas. In Fernana (the first delegation to be canvassed), the PFPC fieldworkers conducted a six-month follow-up visit to determine contraceptive use, provide additional motivation and free resupplies and recruit new family planning acceptors. Eligible women in Jendouba, where there was a higher level of previous activity and better access to family planning services received, in contrast, only one household visit.

In Ain Draham, the last area reached by the canvassers, an integrated FP/MCH household delivery system was tested. During the first round of household visits, the health interventions added to the canvassers' family planning activities included: height and weight measurements of all pre-school children; detection of diarrhea and certain eye, skin and parasitic diseases; advice on pre- and post-natal care; and vaccination referral. During a second round of household visits, the responsibilities of the PFPC team were further expanded to include the distribution of Neo Sampoo foaming tablets (primarily lactating women and those unable to take oral contraceptives) and packets of Oralyte (with instructions on proper use) to each household with pre-school children.

Unfortunately, due to supply shortages the distribution of Oralyte oral rehydration salts only was limited to two districts of the delegation. The second visit in Ain Draham also involved a special campaign in which the PFPC driver distributed condoms to interested husbands.

Following completion of the household visits in each delegation, a permanent contraceptive resupply system was tested. The principle

agents in the system were field workers from the Preventive Health Service who were asked to include the distribution of contraceptive supplies during their regular biweekly visits to designated meeting places in the three delegations. The acceptability and feasibility of employing social assistants from the Ministry of Social Affairs (MSA) and omdas (district administrative officials) as resupply agents were also tested in Jendouba and Ain Draham delegations, respectively.

Another feature of the research design was medical follow-up provided by the OB/GYN who served as project director. A program of weekly visits to selected locations (generally schools) in each delegation was established. These consultations served as an additional mechanism for follow-up and resupply of family planning acceptors. The PFPC director provided gynecological examinations, treatment of side effects, as well as reassurance and motivation for women using a contraceptive method.

#### IV. ASSESSMENT OF PROJECT IMPACT

##### Data Sources

The variations in the design and implementation of the PFPC are paralleled by differences in the quantity and quality of data available for measuring the impact of the project. The major drawback is the absence of a pre-intervention survey, providing baseline data on demographic characteristics, fertility and contraceptive behavior of the target population in the governorate. Moreover, since primary emphasis was placed on service delivery and reduction of administrative costs, only minimal information was collected during the household visits in the experimental areas. Basic items, such as type of contraceptive method being used at the time the PFPC household visits began, age and parity of the MWRA, and details on lactation status (amenorrheic or menstruating), were not included. An analysis of changes over the life of the project in age-specific prevalence and fertility as well as desired family size is, therefore, not possible.

Fortunately, analysis for the experimental areas is enriched by the results of the one-year follow-up survey in Fernana delegation and 1979 governorate-wide Contraceptive Prevalence Survey (CPS) which serves as a post-intervention benchmark. Additional useful information is provided from resupply and medical follow-up records, as well as from the special condom distribution and mini-surveys on acceptability and use of Neo Sampoons and Oralyte in Ain Draham. The only family planning data available for the control areas is drawn from ONPFP program statistics and the CPS.

### Coverage of the Target Population

The five PFPC fieldworkers contacted a total of 24,412 women, of which 14,131 were currently married and aged 15-44 (MWRA). This represents slightly over 70 percent of the estimated total number of MWRA in the target area. Coverage of the eligible population was almost complete as very isolated households were excluded from the research protocol for logistical and financial reasons. In two of the target delegations -- Fernana and Ain Draham -- the PFPC canvassers revisited 6,046 women, roughly four-fifths of the eligible population contacted during the initial round of household visits.

### Contraceptive Acceptance

During the 30-month period of the project, PFPC canvassers and other field personnel recruited a total of 3,078 new family planning clients, almost 50 percent of the population actually exposed to the risk of pregnancy (Table 3).

### Variation by delegation

Roughly three-fifths of all PFPC acceptors (Figure 3) came from Fernana, the delegation canvassed first in the project and the one with the lowest baseline contraceptive prevalence rate (16 percent). Slightly more than one-quarter of the acceptors were from Jendouba where the proportion of women already contracepting was quite high (33 percent) and there was only one visit to recruit new family planning clients.

Table 3

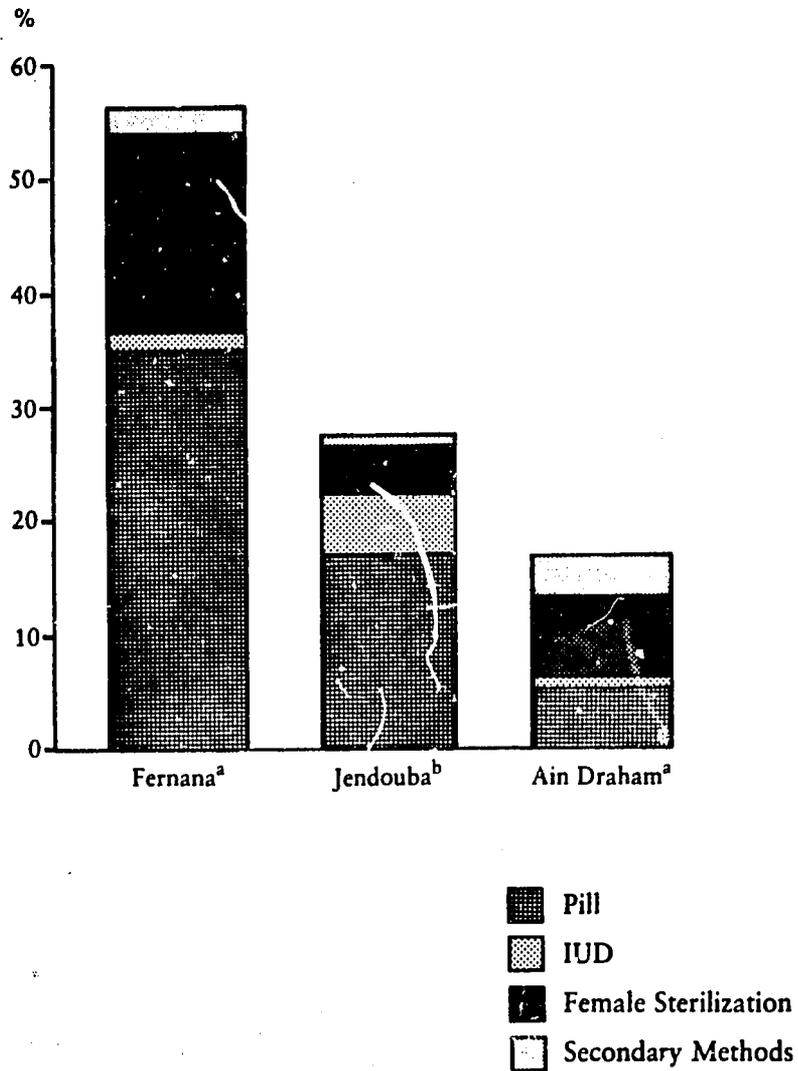
THE DISTRIBUTION OF FAMILY PLANNING ACCEPTORS BY DELEGATION  
AND RECRUITMENT AGENT

Recruitment agent	Total	Delegation		
		Fernana	Jendouba	Ain Draham
TOTAL	3,078	1,754	816	508
<u>PFPC Canvassers</u>				
First visit	2,434	1,402	713	319
Second visit <sup>a</sup>	393	288	-	105
<u>Other project staff<sup>b</sup></u>	251	64	103	84

<sup>a</sup>Fernana and Ain Draham were canvassed twice.

<sup>b</sup>Includes the project gynecologist, resupply agents and project driver.

**FIGURE 3**  
**PFPC Acceptors by Delegation and Method**



<sup>a</sup> includes acceptors recruited by the PFPC team in both rounds of the household visits as well as by the project gynecologist and resupply agents. In Ain Draham, the total also includes condom acceptors obtained by the project driver.

<sup>b</sup> includes acceptors recruited by the PFPC team in the one round of household visits as well as by the project gynecologist and the resupply agents.

A key factor in the comparatively low level of contraceptive acceptance in Ain Draham (only 16 percent of all PFPC acceptors) was the addition of health interventions which limited the time spent by the canvassers on family planning activities.

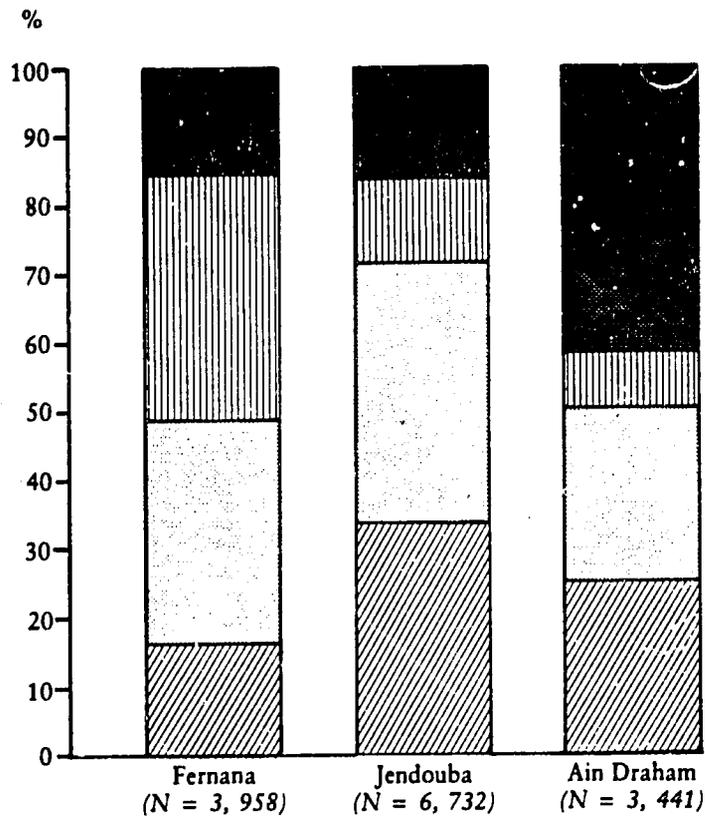
Figure 4 shows the variation among the three delegations in terms of both exposure and acceptor status. In Fernana and Ain Draham delegations, roughly half of the MWRA contacted by the PFPC team in the first household canvass were at risk of pregnancy while in Jendouba only 28 percent were exposed and not using family planning. The rate of acceptance of contraceptive methods among the at risk population differed significantly, ranging from only 18 percent in Ain Draham to almost 40 percent in Jendouba and to a high of 70 percent in Fernana.

#### Variation by method

The majority of PFPC acceptors (57 percent) chose oral contraceptives, demonstrating the popularity of the pill among women in rural, isolated areas of Tunisia. The PFPC team also found continued strong interest in tubal ligation -- the principal method of contraception prior to the launching of household contraceptive distribution. Nearly one-third (30 percent) of the MWRA contacted by the canvassers accepted a referral for a sterilization -- almost five times the number who requested an IUD or who received secondary methods (foam, condoms and in the case of the second visit in Ain Draham, Neo Sampoons).

The pattern of method performances among acceptors again varied by delegation (Figure 2). The pill was preferred by acceptors in Fernana and Jendouba; 64 percent and 60 percent, respectively, of all acceptors in these delegations received a supply of the oral contraceptives compared to less than 35 percent of new family planning clients in Ain Draham. In the latter delegation, more than one-half of all acceptors chose sterilization. The greater interest in the IUD in Jendouba than in the other two delegations reflects the perceived easier access in that area to clinics offering IUD insertions. Finally, the provision of Neo Sampoons during the follow-up visit in Ain Draham, as well as the use of

**FIGURE 4**  
**Exposure and Acceptor Status among Eligible Women Contacted during the**  
**Initial Household Visits in the Three Delegations Canvassed in the**  
**PFPC Project**



-  Not exposed—using family planning
-  Not exposed—pregnant, lactating, infecund, or husband absent
-  Exposed—acceptor
-  Exposed—nonacceptor

the project driver to distribute condoms resulted in greater overall level of acceptance of secondary methods in Ain Draham than in Fernana or Jendouba.

### Contraceptive Use - Results of Follow-Up Visit

In both Fernana and Ain Draham, slightly more than one-third of all the women who accepted a family planning method at the time of the first household canvass were found to be using that method at the time of the second visit, six to nine months later (Table 4). The percent of pill acceptors who were continuing to use the method at the follow-up visit was much higher in both Fernana (38 percent) and Ain Draham (39 percent) than it had been among pill acceptors in the earlier PFAD household contraceptive distribution project (13 percent).

The most frequently cited reasons for non-use or discontinuation of oral contraceptives were fear of side effects,<sup>1</sup> husband's opposition and pregnancy. The latter two reasons, together with switching to another method, were also reported by tubal ligation and IUD candidates who had not obtained the initial method of choice by the time of the second household visit. The biggest single obstacle for surgical contraception candidates was inadequate transportation from isolated project areas to the nearest appropriate facility.

### Contraceptive Resupply and Referral

#### Resupply mechanisms

To ensure continued availability of contraceptives in the target area following the last round of household visits, the PFPC project recruited 27 agents (nurse-hygienists and health agents, social assistants and district administrative officials to provide, at designated meeting

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1. Reported side effects from the pill were very low.

Table 4

THE PERCENTAGE OF FIRST VISIT ACCEPTORS USING CONTRACEPTIVES AT THE SECOND CANVASS<sup>a</sup> IN FERNANA AND AIN DRAHAM DELEGATIONS BY METHOD

Method	Fernana	Ain Draham
	(%)	(%)
TOTAL	35	35
Pill	38	39
IUD	44	24
Female Sterilization	29	32

<sup>a</sup>Six to nine months after the initial household visit.

places, contraceptive resupplies (OCs, foams, condoms) as well as referrals for other methods. The use of these agents did considerably expand the number of family planning outlets in the PFPC delegations. Before the start of the project, contraceptives were offered at a total of 18 different fixed outlets (2 hospitals, 2 MCH centers, 13 dispensaries and the regional family planning center). As a result of the project activities, this number jumped to 94 facilities and meeting places, a relative increase of over 400 percent.<sup>1</sup>

Complementing the activities of the resupply agents was the PFPC medical director. At intermittent periods between January 1978 and October 1979, he saw a total of 680 women at 26 locations throughout the three-delegation area.

The records kept by the resupply agents and the project gynecologist were very incomplete; they covered varying lengths of time and provide data on pill acceptors only. Table 5 summarizes the information that is available on the activities of these individuals. Together, they resupplied a total of 493 pill users who had received initial supplies from the PFPC canvassers. In addition, they recruited a total of 173 new oral contraceptive users.

It is difficult to assess the relative effectiveness of the itinerant workers in their new role as family planning motivators and distributors. Each health agent provided contraceptives to an average of 25 family planning clients (old and new pill acceptors); the corresponding figures for social workers and omdas were 9 and 10 respectively. It must be pointed out, however, that information on the health agents is available for approximately a two-year period, compared to only several months for the social assistants and omdas. The mean number of oral contraceptive clients seen by each agent per month is approximately the same for the three categories of workers. Information on other contraceptives supplies

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1. These figures do not include household visits by the social assistants in Jendouba delegation.

Table 5

## ACTIVITIES OF THE ORAL CONTRACEPTIVE RESUPPLY AGENTS IN THE THREE PFPC DELEGATIONS

Delegation and Period	Health Agents (21) <sup>a</sup>		Social Assistants (3) <sup>b</sup>		Omdas (3) <sup>c</sup>		Project Gynecologist		Total Pill Clients
	PFPC Pill Acceptors Resupplied <sup>d</sup>	New Pill Acceptors Recruited	PFPC Pill Acceptors Resupplied	New Pill Acceptors Recruited	PFPC Pill Acceptors Resupplied	New Pill Acceptors Recruited	PFPC Pill Acceptors Resupplied	New Pill Acceptors Recruited	
Fernana (12/77-12/79)	237	41	-	-	-	-	24	19	321
Jendouba (9/78-12/79)	141	82	19	8	-	-	26	11	287
Ain Draham (10/79-12/79)	16	-	-	-	26	3	4	9	58
<b>Total</b>	<b>394</b>	<b>123</b>	<b>19</b>	<b>8</b>	<b>26</b>	<b>3</b>	<b>54</b>	<b>39</b>	<b>666</b>

<sup>a</sup>Served as resupply agent in all three delegations.

<sup>b</sup>Served as resupply agent only in Jendouba.

<sup>c</sup>Served as resupply agent only in Ain Draham.

<sup>d</sup>Includes 43 resupplied by the CREFP dispensary.

Table 6

THE NUMBER AND PERCENTAGE OF TUBAL LIGATIONS AND IUD INSERTIONS AMONG CLINICAL METHOD CANDIDATES RECRUITED BY THE PFPC CANVASSERS BY DELEGATION AND VISIT

Delegation and Visit	Method					
	Female Sterilization			IUD		
	Total Referrals (Number)	Ligations Performed (Number)	Percent	Total Referrals (Number)	Insertions Performed (Number)	Percent
<u>Fernana</u>						
First Visit	468	142	30	37	15	41
Second Visit	57	21	4	10	4	40
<u>Jendouba</u>	183	22	12	117	18	15
<u>Ain Draham</u>						
First Visit	175	54	31	17	4	24
Second Visit	35	3	9	10	-	-
TOTAL	918	242	26	191	41	21

along with IUD and tubal ligation referrals is, unfortunately, not available. Nevertheless, the rather low figure for resupplying oral contraceptive clients suggests that the agents' other responsibilities did not leave much time for family planning activities.

#### IUD and sterilization referral

As mentioned earlier, follow-up and transportation of IUD and sterilization candidates recruited by the PFPC canvassers proved to be inadequate. Table 6 shows that, by the end of the project, only about one out of every five IUD acceptors and one out of every four sterilization candidates actually obtained the method for which they were originally referred. Vehicle breakdowns, bad weather, and to a lesser extent, poor organization and switching to other methods, are responsible for the relatively low percentages of women who finally received an IUD or tubal ligation. In view of the difficult terrain, and highly dispersed settlement patterns, providing prompt transportation to all surgical contraception candidates would have required a significant greater investment of effort and money than was feasible in the project.

### Change in Contraceptive and Fertility Behavior in the PFPC Delegations

#### Increase in Contraceptive Prevalence

The trend in the contraceptive prevalence rate in the three PFPC project areas is examined in Figure 5 and Table 7. In considering the pattern of change in each area, it is important to remember that the measures were taken at different points in time over the 30-month period of PFPC field activities and that the populations for which the rates were calculated also differ somewhat as Table 7 indicates. Since no pre-intervention survey was fielded, the baseline contraceptive prevalence rate in each target delegation is estimated from information collected in the initial household visits. The exclusion of married women living in the most isolated regions in each delegation is assumed to have resulted in some exaggeration of these baseline rates. Therefore, comparisons of those rates with the prevalence levels reported at the

**FIGURE 5**  
**Trend in the Contraceptive Prevalence Level in the Three Delegations**  
**Cauvassed in the PFPC Project**

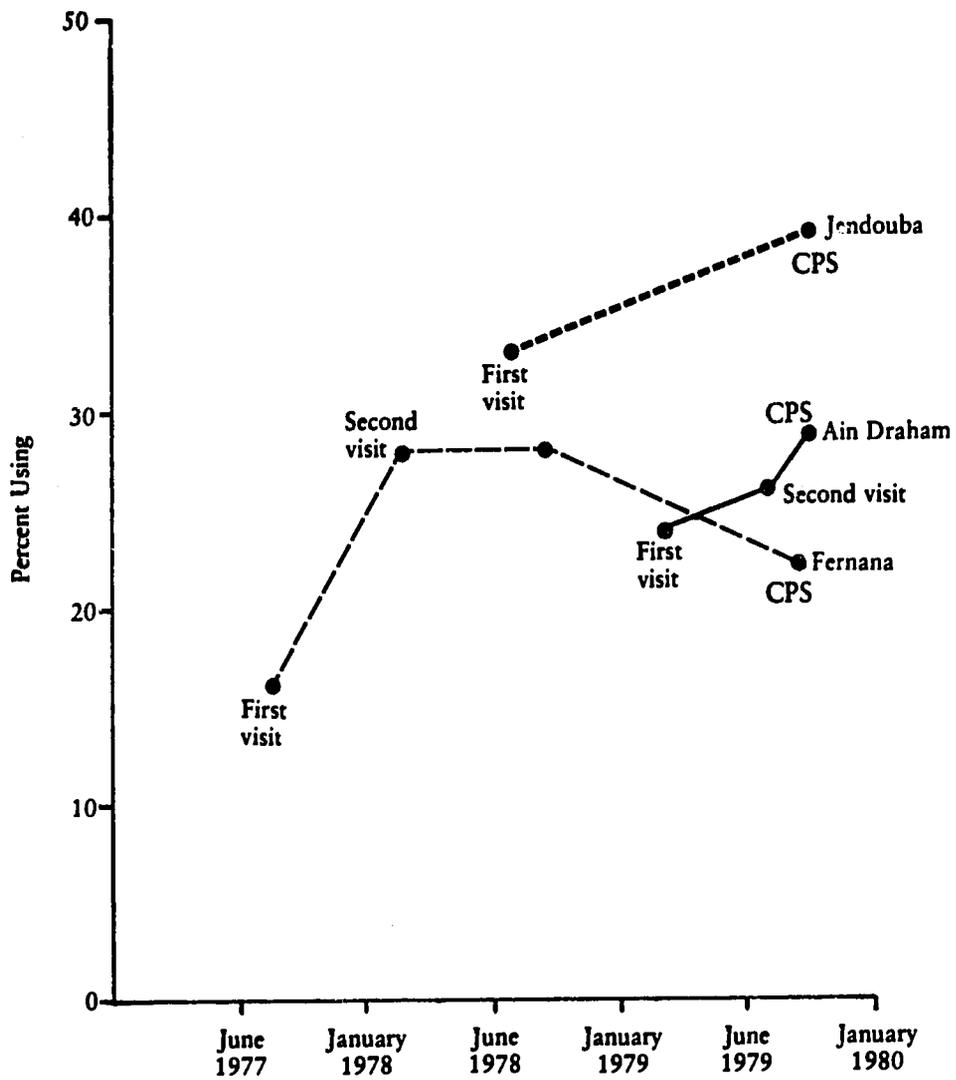


Table 7

## TREND IN THE CONTRACEPTIVE PREVALENCE RATES, PFPC DELEGATIONS, 1977-1979

Delegations	Percent Using			
	First Visit	Second Visit	Follow-up Survey	CPS
Fernana	16 <sup>a</sup>	28 <sup>b</sup>	28 <sup>c</sup>	23 <sup>c</sup>
Jendouba	33 <sup>c</sup>	-	-	39 <sup>c</sup>
Ain Draham	24 <sup>a</sup>	26 <sup>b</sup>	-	29 <sup>c</sup>

<sup>a</sup> Rate among currently married women aged 15-44 visited in the household canvass.

<sup>b</sup> Estimated rate among currently married women aged 15-44 visited in the second canvass based on an assumption of 100% continuation among women already contracepting at the first canvass and the rates of use among first canvass acceptors.

<sup>c</sup> Rate among all currently married women aged 15-44 in the delegation.

time of the final governorate-wide survey (in which all currently-married women aged 15-44 were sampled) understate to some extent the overall change in contraceptive usage in the delegations.

An examination of the trend in prevalence rates suggests that the amount of change in prevalence was greatest in Fernana where the percentage of women practicing contraception at the start of the project (16 percent) was the lowest. Figure 5 shows that 28 percent of MWRA visited by the PFPC team in Fernana were using family planning at the time of the second canvass, representing a relative increase in contraceptive prevalence of 75 percent in the 12 month period between the two rounds of household visits. The results of the 1978 Fernana Follow-Up Survey (fielded three months after the completion of the household canvass) indicate an identical prevalence rate (28 percent) among all MWRA, confirming that a substantial change in the level of contraceptive use occurred in the delegation as a result of the intensive household distribution effort. Data from the governorate-wide prevalence survey (CPS) suggest that, although there was some drop-off in use in the 18 months following the final canvass, the gains in prevalence in Fernana are being maintained. Twenty-three percent of all currently married women aged 15-44 were using family planning at the time of CPS, a rate that was 44 percent higher than the contraceptive prevalence estimated at the initial household canvass in Fernana 30 months earlier.

In Jendouba, where baseline prevalence was more than twice that of neighboring Fernana delegation, the impact of the one round of household visits by the canvassers was less impressive. Table 7 shows that, between the initial household canvass and the final CPS, contraceptive use among married women in Jendouba delegation increased by an estimated 18 percent -- from 33 to 39 percent in 14 months. As was the case in Fernana, the CPS results for Jendouba reflect the longer term influence of the project on contraceptive behavior among women in the delegation.

In Ain Draham, as a result of 10 months of household visits (two rounds) during which health interventions were offered as well as family planning, contraceptive prevalence among MWRA increased from 24 to 29

percent, a relative change of 21 percent. Since the CPS was fielded only a few weeks after the end of the second canvass in Ain Draham, the prevalence level recorded represents the peak impact of the PFPC activities on contraceptive use among women in the delegation.

#### Decrease in Women at Risk of Pregnancy

In Fernana, the percentage of MWRA at risk of pregnancy dropped, over the life of the project, from 51 percent to 29 percent, a relative decrease of 43 percent. The corresponding decrease in Ain Draham was 36 percent. In Jendouba, on the other hand, the percentage of women exposed to the risk of pregnancy increases very slightly. Overall, in the PFPC project areas, there was a 27 percent decrease in the number of MWRA at risk of pregnancy.

#### Impact of PFPC versus Ongoing Family Planning Program Efforts

##### Comparison with Regular ONPFP Program

An intensive household distribution campaign like the PFPC may have little impact on the prevalence level if it merely recruits women who would have otherwise adopted methods through regular program channels. Figure 6, which compares program acceptor levels in 1976 (before the PFPC was initiated) with those of subsequent years, indicates that, the PFPC has a sizeable effect on increasing the overall level of family planning activity in the project delegation in Jendouba governorate.

In each year of the project, the acceptors directly recruited by the PFPC team represented a significant addition to the number of women accepting the contraceptive methods through the regular ONPFP program (Figure 6). In 1977, for example, there were a total of 977 acceptors in the PFPC project, an increase of almost 60 percent in family planning activity compared to 1,693 acceptors obtained through the program alone. This increase reflects the greater success of the PFPC in Fernana delegation which was canvassed in 1977 than in Jendouba or Ain Draham delegations in which household visits were made in the latter two years of the

project. Sizeable relative increases in the number of new acceptors in both 1978 (34 percent) and 1979 (14 percent) were, nevertheless, owed to the efforts of the PFPC team in the latter delegations.

#### Comparison with Non PFPC Delegations

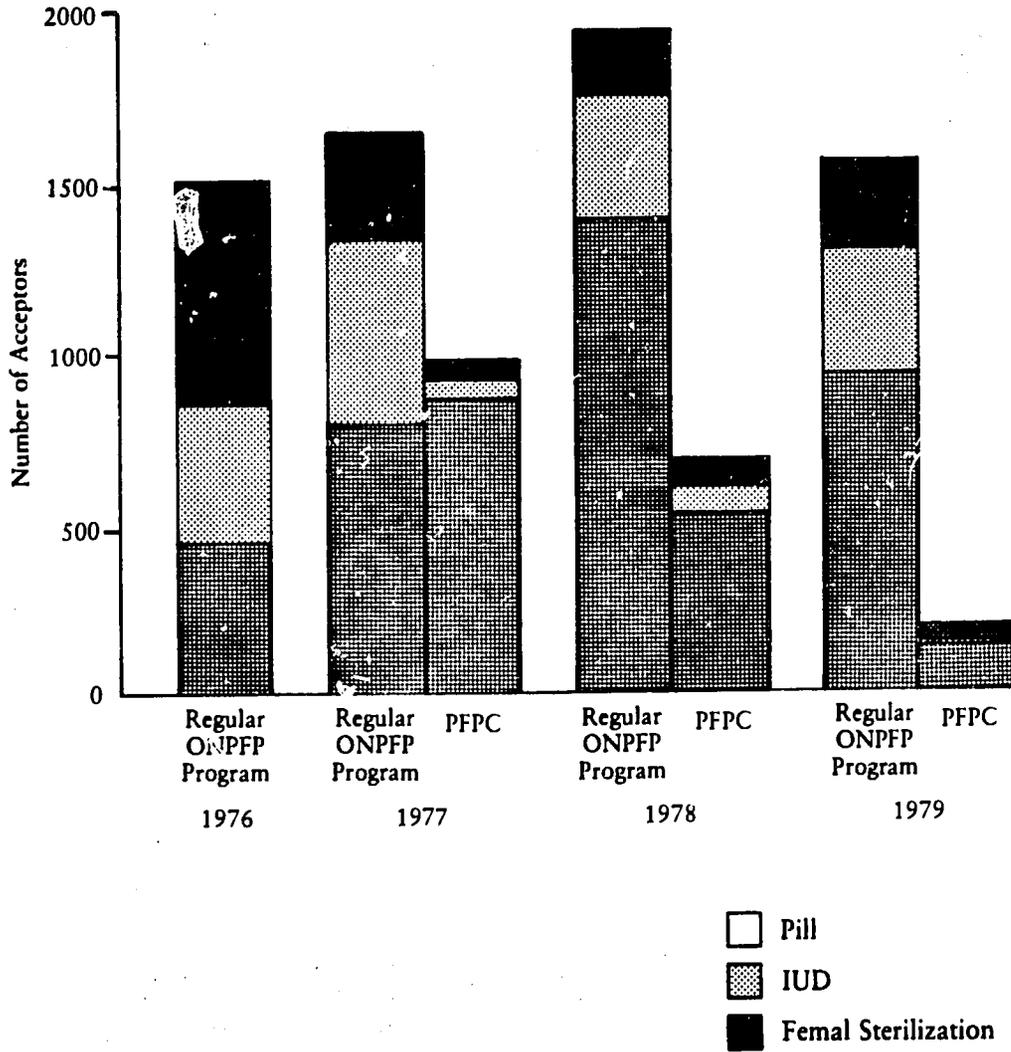
Figure 7, which compares the trend in the rate of new family planning clients in the PFPC and non PFPC delegations between 1976 and 1980, also documents the differential impact of the project on acceptor levels. In 1976, the acceptor rate in Fernana, Jendouba and Ain Draham delegations was only slightly higher than the rate in Bou Salem, Ghardimaou and Tabarka. However, during 1977 and 1978, the peak activity years of the project, there were sizeable differences (over 100 percent) in family planning acceptor rates between the PFPC and non PFPC delegations. The differential is particularly striking when acceptors recruited by PFPC project personnel are taken into account. The differences between project and non-project areas that remain, even when the latter acceptors are excluded, reflect the indirect impact of the PFPC, i.e., at least part of the differences are likely owed to past-canvass method acceptance among women in the PFPC areas as a result of the canvasser's motivational activities.

### V. IMPLICATIONS FOR THE NATIONAL FAMILY PLANNING PROGRAM

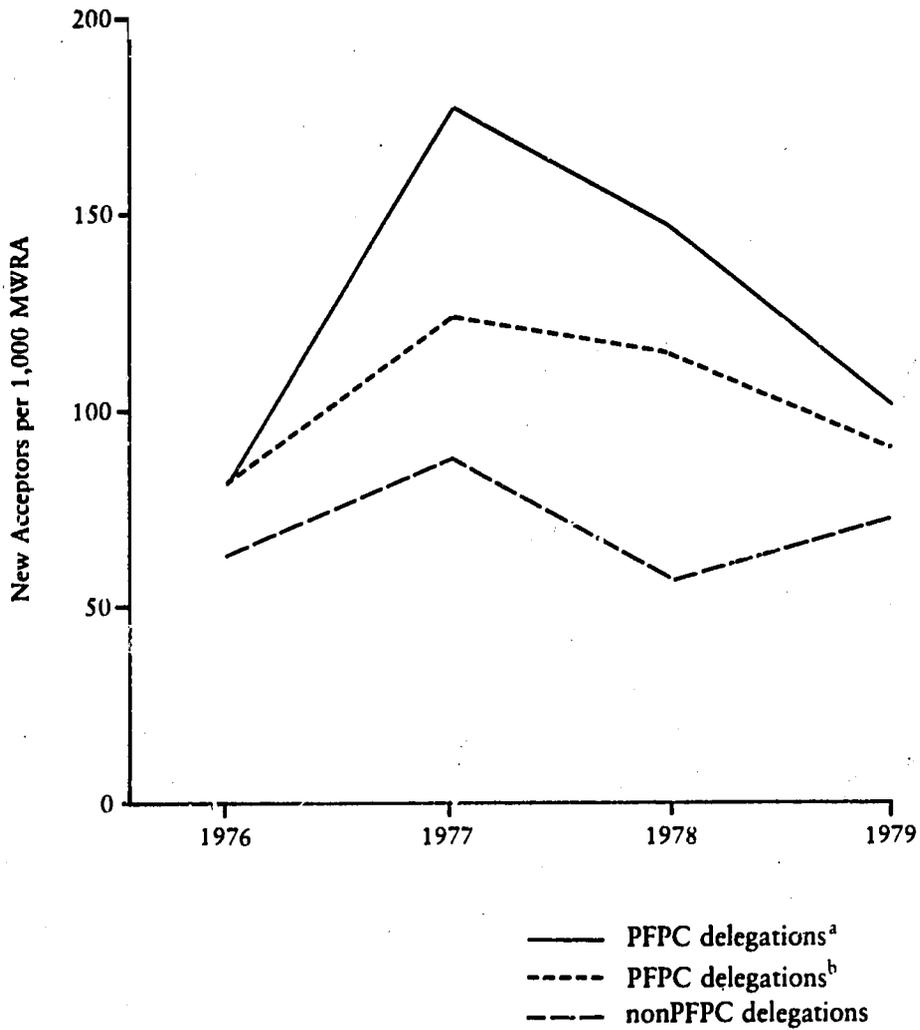
#### Lessons from PFPC

The significance of the PFPC experiment extends well beyond the borders of Jendouba governorate. It represents the first serious attempt to develop and evaluate a family planning service delivery model for rural Tunisia, one that is both effective and relatively inexpensive. The PFPC project was designed to respond to the two major challenges facing the Tunisian family planning program: substantial unmet demand for family planning and limited accessibility of services in such areas.

**FIGURE 6**  
**Acceptors in the Three Delegations Canvassed in the PFPC Project by**  
**Method and Recruitment Status, 1976-1979**



**FIGURE 7**  
**Trend in the Rate of Acceptors in the PFPC and nonPFPC Delegations,**  
**Jendouba Governorate, 1976-1979**



<sup>a</sup> includes acceptors recruited in the regular ONPFP program and in the PFPC project.

<sup>b</sup> includes only the acceptors recruited in the regular ONPFP program.

The following PFPC programmatic findings are of particular importance to expanding government initiatives:

- o Household distribution of contraceptives, already tested on a pilot basis in Central Tunisia, is acceptable and feasible on a large scale, even in the country's most difficult regions. Supplemented by a network of resupply points, this system can result in substantial increases in contraceptive acceptance and use, particularly in areas with lower levels of contraceptive prevalence and limited access to health facilities.
- o Oral contraceptives can be distributed safely by non-medical personnel, working under medical supervision.
- o Young women, who are locally recruited and specially trained, can serve as effective family planning motivators and providers: they can bridge the gap between a widely dispersed population and weak health infrastructure.
- o Acceptance and use of secondary methods, traditionally very low in rural Tunisia, can be increased when they are promoted, carefully explained and made fully available (e.g., experience with Neo-Sampoons in Ain Draham delegation).
- o Although condom acceptance is rare among women in rural areas, the method can be popular if offered directly to men and male distributor, as demonstrated in Ain Draham.

The PFPC project also presents a unique opportunity to assess the impact on contraceptive acceptance and use in rural Tunisia of a household distribution program which offers only family planning services versus one in which contraceptive information and supplies are combined with health interventions. The two areas selected for comparison - Fernana and Ain Draham delegations - were very similar in geographic and population characteristics. The only major difference, at the start of the PFPC activities, was a better health infrastructure and slightly higher (8 percentage points) baseline contraceptive prevalence in Ain Draham. In both delegations, approximately half of the MWRA were at risk of pregnancy and eligible for family planning. Yet in Ain Draham (integrated delivery system), family planning acceptance rates were one-third those in Fernana delegation (family planning only). After one year, contraceptive prevalence rates showed a 75 percent increase in Fernana compared to only 21 percent in Ain Draham. The PFPC findings refute one of the project's hypotheses, that family planning acceptance and use rates

would be higher where contraceptive services were offered in the context of other maternal-child health care. Although there were clear benefits derived from the additional health activities, efforts to motivate and recruit new family planning clients were greatly diluted in Ain Draham.

Many of the normal problems faced in delivering services in rural Tunisia were intensified in the PFPC project because of the mountainous terrain and an unusually high population dispersion rate. Moreover, components traditionally weak in the ONPFP program were carried over into the PFPC, e.g., inadequate in-service training and supervision of field workers, and lack of family planning promotional and instructional materials for rural women. Despite these difficulties, the PFPC achieved a higher output-input ratio than other pilot efforts aimed at improving FP/MCH services in rural areas of the country. The cost per new family planning acceptor in the PFPC project was two-thirds lower than the corresponding cost in PFAD, Tunisia's first household contraceptive distribution experiment. This is true even with the inclusion of health interventions during the last year of the PFPC project which resulted in a 13-fold increase in cost per new family planning acceptor. Moreover, PFPC distributors were able to contact 5-10 times more eligible women than other community based distribution efforts in rural Tunisia.

#### Unmet Demand for Family Planning

Despite substantial improvements in family planning service delivery in three of Jendouba's six delegations as a result of PFPC activities, the 1979 CPS findings show continued high fertility levels throughout the governorate.<sup>1</sup>

More importantly, the data reveal a strong desire to limit family size as well as to space births. Eighty percent of the women who were contracepting at the time of the survey did not want additional children. Among the MWRA aged 15-44 who were not using a contraceptive method, roughly two-thirds either did not want more children or wanted to space

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1. MWRA aged 45-49 have had, on average, 7 births.

their next birth. Slightly less than one-third of these women were exposed to the risk of pregnancy and, therefore, in immediate need of family planning services. Pill and tubal ligation were the preferred methods among the potential family planning acceptors.

#### Availability of Family Planning Services

According to CPS results, the most critical variable in tapping the unmet demand for family planning is improving the accessibility of services in rural areas. By experimenting with different resupply mechanisms, the PFPC project was able to expand greatly the number of family planning service delivery points in the target areas, more than in any other location in rural Tunisia. Nevertheless, the resupply network was far more limited than originally planned, and family planning services were not always provided on a regular basis. Also, women were not sufficiently well informed about the location of these contraceptive supply points.

The survey, fielded after the termination of PFPC activities, showed that the majority of family planning clients in the governorate obtain their methods from the largely-oriented health infrastructure and are clearly dissatisfied with this system. More than one-half of the women reported that they were 60 minutes travel time from the place where they obtained their method; 54 percent considered it difficult to get to their service provider. Inaccessibility of service outlets is particularly serious for women relying on the pill and other supply methods. One of every five women who were not contracepting at the time of the CPS did not know where to obtain a modern family planning method. Among the non-users in rural areas who expressed an interest in taking the pill, two-fifths were unable to name a source for that method. In addition, over half those who knew a source considered it difficult to get there.

## Recommended Actions

Ways of increasing the accessibility of family planning services in rural Tunisia have been tested in the PFPC project as well as in other community based distribution experiments. Corrective measures have also been identified in the 1980 in-depth evaluation of the Tunisian family planning program (Maguire, 1980). Steps currently being taken by the ONPFP to address serious imbalances in contraceptive availability include:

- o expanded household contraceptive distribution efforts in selected underserved areas of Central and Southern Tunisia;
- o increased coordination and utilization of personnel and resources from other Ministries and agencies to delivery family planning services in rural areas;
- o monitoring existing service providers, identifying problems and strategies for improving the level of output and the quality of services;
- o revitalizing postpartum family planning activities;
- o establishing mechanisms for better follow-up and transportation of IUD and tubal ligation candidates; and
- o expanding, initially on an experimental basis, the number of contraceptive methods, to include postpartum IUDs, foaming tablets and injectables.

An important related concern for the ONPFP is strengthening family planning promotional and educational efforts, through:

- o development of simple instructional materials of different contraceptive methods which address the specific needs and concerns of rural couples; and
- o expanding the number of motivational activities directed at men in an effort to increase spousal approval of family planning and use of condoms.

Another critical need is the establishment of permanent contraceptive resupply points in communities to ensure full availability of methods suitable for spacing births. Ultimately, this must include greater involvement in family planning of the commercial system, including a decision to permit stocking of contraceptives in small rural stores and markets.

## The Challenge for the 1980s

The major challenge for the national family planning program is to translate the desires of rural women to limit births, as witnessed in Jendouba governorate, into contraceptive behavior that results in desired reductions of fertility levels. In order to prevent an actual increase in the current level of contraceptive use, numbers of new acceptors must increase sharply.

The data from the Jendouba CPS provide a dramatic illustration of what may happen in other rural areas of Tunisia if present trends continue. At the end of the PFPC activities, contraceptive prevalence among currently married women aged 15-44 in the governorate was moderately high -- 33 percent compared to 30 percent<sup>1</sup> (1978 WFS) for Tunisia as a whole. In terms of contraceptive mix, Jendouba has a much higher level of female sterilization -- 55 percent of current users -- than the national average. Women who were sterilized in the early 1970s will soon be aging out of the user population. Unless family planning acceptor levels increase beyond the averages experienced in the regular ONPFP program during the last several years, contraceptive prevalence rates in Jendouba will drop to 20 percent in 1985.

In response to those concerns, the Tunisian government has included ambitious family planning and demographic objectives for the 1982-1986 Economic and Social Development Plan. The strategy calls for a strengthened and expanded family planning program, with a target of twice the number of family planning acceptors recorded during the last five years. The success of this effort will be dependent on the effectiveness of the ONPFP in maximizing existing local resources, strengthening the expanding family planning promotional activities, and increasing significantly the number of service providers in rural areas.

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1. Includes 8 percent use of rhythm, withdrawal and other traditional methods.