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Continuation and Discontinuation of Contraceptive Use by Method and Reasons for Drop-Out in CSI Project

Final Report

Cairo Demographic Center (CDC)

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This research was done during the period from July 1993 to June 1994 to provide information that will assist in developing new strategies for CSI services in terms of staffing patterns, training, counseling and administration

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We hope that the findings will fulfill the required objectives

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Executive Summary

This study was conducted to examine the performance of the Clinical Services Improvement (CSI) project vis-a-vis its objectives of creating a clientele of satisfied and continual users of contraceptive methods. The study's results are suggestive of new strategies for improving staffing patterns, in-service training programs for clinic staff, client counseling and modifying the administration of the CSI program (both on the central and clinic levels). The study examined a number of indicators, including the following:

- Client characteristics
- History of contraceptive use (by method, including switching methods and extended use failure rates)
- Reasons for continuing or stopping CSI service use, or contraceptive method use
- CSI client satisfaction with the services they have received

The data that was used to provide this information was collected from two sources: (1) Clinic records (September 1993), and (2) Client interviews, conducted during November and December, 1993. Two cohorts of clients were selected for the study: All first time CSI clients who began use in January, 1989 (representing the CSI primary center clientele, which began operations in 1988), and all first time CSI clients who began using CSI clinics in January, 1990 (representing the CSI primary and satellite center clientele which opened in 1989).

The resulting sample of CSI clients is characterized by women of early middle age (30 years average), with the age at marriage about 20 years old and a mean number of living children slightly less than four. These clients have had more than 6 years of formal education (i.e., they are considerably more educated than women of comparable age in the general population). Their occupational status is also higher than general, and a larger proportion are working (31%) than is the average for all Egyptian women of similar age today. Approximately 32% of the study's clients live in rural areas. Regarding their contraceptive use, the IUD is the most common method used (65%), followed by oral contraceptives (15%), injection (11%) and condoms (9%). Injectable contraceptives are used by older clients (average age is 36.5 years), whereas pills are used by younger

clients (average age is 32.8 years) IUDs and condoms are used by the more highly educated clients (more than 6 years of schooling) compared to clients who use injectable or oral contraceptives

The study interviewed 2,227 clients who were asked several questions about their contraceptive use history and family planning service use history during the past four to five years. The results show that although all of these clients initially began with CSI services, only about 17% were still using CSI after four to five years. 29% of the clients had stopped using contraceptive methods and CSI services, whereas 54% of these clients were still using a contraceptive method but not using CSI. Among this group of 54% who are still using a method but not CSI there are two important sub-groups. The first sub-group are clients who did not need to return to CSI because they are using a long acting method (22%). The second sub-group are clients who are still using a method but have changed sources of family planning services away from CSI to another provider (32%). The majority of the clients who continued to use CSI services cite the need to use the same provider who provides good quality care for follow-up and management of side effects. Among those clients who moved away from CSI services, the majority shifted to using pharmacies (45%) or private doctors (25%). The most common reasons for changing sources was the relative ease of access to the new source for follow-up services.

An important finding of this study is that even though many CSI clients moved on to other sources or stopped coming back for follow-up visits, approximately three quarters of the 2,227 clients (72%) were still using a method of contraception four to five years after their initial contact. The significance of this high level of sustained contraceptive use should not be lost in the discussion of shifting sources or failing to return for follow-up, as it relates directly to an objective of CSI to create clientele of satisfied and sustained contraceptive users.

The study carefully examined switching from method to method. Such changes in methods can indicate dissatisfaction with the contraceptive method, or the failure of the provider to adequately manage / prepare the client for side effects. A pattern of repeated switching can increase the chance of failure if there are periods of non-use in between the changes of methods. The latter was clearly

occurring among these clients in this study, as they experienced up to 5 changes in methods during the past four to five years. In all, the 1,779 clients in the study's second cohort (those who began use in January 1990) changed methods a total of 1,045 times. Not surprisingly, two thirds of the changes were because of side effects (62%). Most of the clients who changed had been using either a condom or an injectable and moved to pills, as initially there were 170 pill users which increased to 278 users at the end of the study period (a 63% increase). IUD users by contrast were observed to be more stable. The study began with 837 IUD users and ended with 831 clients using an IUD.

An unfortunate and avoidable byproduct of the numerous changes in method is an increased risk of unintended pregnancies. There is some evidence in this study of this phenomenon. The 2,227 women in this study experienced a total of 1,081 pregnancies during the past four to five years. 50% of these pregnancies were reported as intended, 19% were accidental during contraceptive use and 31% were accidental during a temporary period of non-use. Life table analyses of the results indicate that the proportion of women expected to conceive accidentally among IUD users is much smaller than those clients who use pills or condoms, as it slightly exceeds 6% by the end of the fourth year ($\pm 1.51\%$). For the pill and condoms the corresponding proportions are 22% and 19% respectively. It was found that failure rates in rural areas is higher than urban failure rates for pill users, but were lower for IUD and condom users.

As suggested by the results that showed the relative stability of IUD users among the pool of clients who changed methods, IUD users have the highest continuation rates. By the end of the first year after admission 74% of the IUD users were still using the method, versus 72% of the pill and 54% of the condom users. IUD users also have the lowest annual rate of decline in continuation. By the end of the fourth year 63% of the IUD users were using the method, compared to 35% of the pill and 19% of the condom users. The mean duration of IUD use among these clients is 50.7 months, which suggests that CSI may consider revising its CYP coefficient. The mean duration of use for the pill is 30.9 months and for the condom is 23.7 months.

The study's results clearly indicate that CSI clients report satisfaction with the services they have received, regardless if they have changed their contraceptive use status. A key finding suggests that the CSI outreach program is not as effective as it could be. Only about 12% of the clients who failed to return to CSI clinics reported being contacted by the program, and even among those who were contacted there was a long period of time between the unkept appointment and the follow-up contact (approximately one half of those clients were contacted only after 6 months or longer). The results from the office study suggested that the social workers report difficulties in conducting the outreach services primarily due to issues concerning the utilization and availability of vehicles.

I. Background

This operations research study was conducted during the second semester of 1993. It examines the contraceptive experience of clients who have received family planning services from the Clinical Service Improvement (CSI) Project, beginning in 1988. The study probed into differences between clients who continued using a contraceptive method and those who stopped, including the reasons for their actions and the types of contraceptive methods they have used. This report presents results from the first complete analysis of the study's findings.

The CSI is a pioneering initiative project that began operations in 1988 as an affiliate of the Egyptian Family Planning Association. It was designed as a service delivery system that promotes the use of high quality services in order to attract large numbers of clients who seek to either delay their next pregnancy or limit their family size. The CSI has established a fairly large service delivery system since 1988 (Table 1).

During the six year period of 1988 to 1993 the CSI system grew from 6 primary centers to 17 primary and 99 satellite centers, the number of clients that CSI serves

Table 1
Number of centers opened and clients registered in CSI during (1988-1993)

<i>Year</i>	<i>No of Centers</i>		<i>Cumulative No of clients</i>
	<i>Primary</i>	<i>Satellite</i>	
1988	6	-	971
1989	6	31*	13747
1990	5	41	69052
1991	-	27	173953
1992	-		270483
1993	-		322581
<i>Total</i>	17	99	

* include Oseem sub-center which was shut in 1993
Source: CSI Service Statistics.

also grew, from 971 clients in 1988 to 322,581 clients in 1993. Overall an average of approximately 54,000 women a year obtain family planning services from CSI.

clinics during the period from 1988 to 1993

II. Statement of the Operations Research Problem

The CSI project began a transition phase between the initial start-up period and the beginning of its activities as a more mature service delivery system. An element of this transition included an assessment of the project's success in building a committed clientele, not only of CSI services but of family

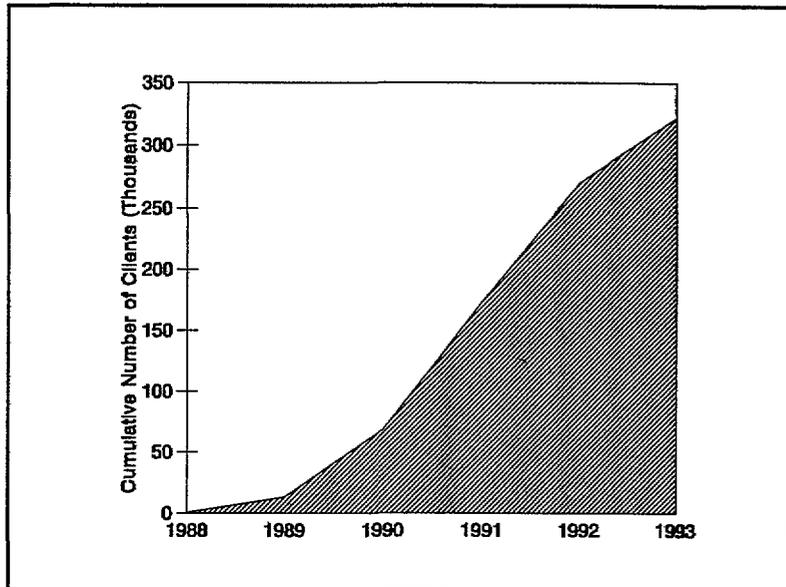


Figure 1 Cumulative Number of Clients Registered in CSI project by the end of each year of the period (1989-1993)

planning in general. Thus CSI program managers were increasingly asking questions about the continuity of contraceptive use among CSI clients -- not only of CSI service use but also about continuity of method use. This is based on the implicit assumption that CSI provides high quality services, especially in counseling, which would be reflected in higher method continuation rates than the average on the national level. The CSI project is but one element of the Egyptian family planning service delivery structure, and national policy makers and senior program managers are concerned to know if clients shift from CSI services to another service delivery system.

This operations research study was developed in response to this programmatic concern. It examines the continuity of CSI service utilization as well as the continuity of contraceptive method use. A related issue concerning the relatively high extended use failure rate of contraceptives is also examined in the study. The 1988 EDHS estimated this rate to be 13% nationwide. Special

tabulations from 1992 EDHS recently estimated this rate is currently 10% nationwide. A fundamental assumption of the CSI project is that high quality services will positively affect the sustained and correct use of contraceptives and, hence, the extended use failure rate among CSI clients will be lower than the national average.

III. Study Objectives

The immediate objective of the study is to provide information that can assist CSI program managers evaluate the effectiveness of CSI project in achieving long term sustained use of contraceptives among its clients. Its results will provide information on the following aspects of the CSI project delivery system: staffing patterns, training programs, counseling practices, clinic administration.

IV. Study Research Questions

The operations research study will provide information from a sample of CSI clients in answer to the following questions:

- What are the socio-economic, demographic characteristics and reproductive intentions of clients who began using CSI project clinics in 1988 and 1989?
- What are the continuation/ discontinuation of contraceptive use rates of CSI clients, by method used?
- What are the principal reasons that prompt CSI clients to switch to another method or shift to another source of family planning services?
- What is the incidence of planned and unplanned pregnancies among CSI clients (both during use and non-use of contraceptive methods)?
- How effective are the CSI follow-up mechanisms and outreach teams in contacting clients and promoting sustained use of contraceptives?
- Based on the observed rates of continuity of contraceptive method use, are there alternative conversion coefficients for the couple years of protection formulae that CSI should be using for the IUD?

V. Study Design and Data Collection Procedures

A STUDY DESIGN

The study followed two cohorts of CSI clients retrospectively, beginning with their first contact at a CSI service delivery point (in 1989 or 1990) up to the time of the data collection activities (September/ December, 1993) The study collected information from two types of data sources CSI client records, and Client Interviews

B SAMPLING PROCEDURES

1. CSI Clinics

The twelve governorates where CSI began operations in late 1988 and 1989 were selected, six governorates in Lower Egypt and six governorates in Upper Egypt

During the time period of this study and starting in 1989, CSI had two categories of service delivery points primary and satellite clinics The range of services is similar in each type of clinic, but the staffing pattern is different (primary centers are larger and have more staff) All of the primary centers in each of the 12 governorates were selected for the study's sample A random sample of 14 satellite centers was selected from the 31 satellite centers that were operating in 1989 in the 6 governorates that opened in 1988

This produced a sample of 26 CSI service delivery points located in 12 governorates (Table 2)

2. CSI Clients

All of the CSI clients who began using a contraceptive method in either January 1989 or January 1990 from clinics selected in the sample were considered for the study's sample Two cohorts of clients were selected in order to have a large enough sample for statistical analyses The first cohort is

composed of clients, of centers which opened in 1988, who began using a contraceptive method in January, 1989 (n=620 clients) The January 1989 cohort is composed of clients from primary centers and who were followed retrospectively for 60 months The second cohort is composed of clients, of centers which opened in 1989, who began using a contraceptive method in January 1990 (n=2,390 clients) This produced a total sample of 3,010 clients in the study The January 1990 cohort is composed of clients from both primary and satellite clinics, and who were followed retrospectively for 48 months (Tables 2 & 3)

Table 2
Sample Size by Group of Centers

Group of Center	Number of Centers	Starting Year of Operation	Cohort Assigned	Length of Follow-up Period	Number of Clients
Primary I	6	Late 1988	Jan 1989	60 Months	620
Primary II	6	Late 1989	Jan 1990	48 Months	1514
Satellite	14	Late 1989	Jan 1990	48 Months	876
Total	26				3010

Table 3
Distribution of sample size by location and type of centers

Location	Cohort (1)	Cohort (2)	Total
Lower Egypt			
Primary	279	1073	1352
Satellite	—	319	319
Sub-total	279	1392	1671
Upper Egypt			
Primary	341	441	782
Satellite	—	557	557
Sub-total	341	998	1339
Total	620	2390	3010

The study of clients status from each CSI clinic was done systematically, using the CSI client forms The "Client Files" of the family planning clients who were registered in each clinic's 'Family Planning Book' during either January 1989

or January 1990 were examined by a sampling team (labelled the "office study" element by the research protocol) Each of these clients was classified as either a continuing user or as a discontinued user An information sheet was created for each client that included summary identification and contraceptive use information that was abstracted from the CSI forms and records that were on file for the client (including the contraceptive use history by month from the date of enrollment up to January, 1993 (the time of the study) This information complemented the results of the client interviews

C DATA COLLECTION AND QUESTIONNAIRES

Three types of data were collected in the study **The first** set was obtained from the clinic's records (e.g., client status forms, counseling forms, follow-up forms and family planning books) The client status forms provided

information on the clients' social, economic and demographic characteristics, in addition to their contraceptive use history and date of enrollment with CSI clinics The data collected from other records was intended to be used for following changes in the clients' contraceptive use

The second set of data was obtained through direct interviewing of each clinic's outreach workers, i.e., social workers This interview collected information on the social workers' training and experience, roles and responsibilities within the CSI clinic, her experiences with home visits and client follow-up activities in general

The third set of data was obtained from direct interviews with clients This data set provides information that addresses the principal objectives and research questions of the study, including the regularity of visiting the center, the frequency and reasons for stopping to use CSI clinics, and contraceptive use dynamics

During the "Office Study" element of the sampling phase, the first two types of data were collected Abstracting forms were developed for recording the data

Three types of data were collected in the study.

- 1 Clinic records*
- 2 Direct interviews of clinic outreach workers and*
- 3 Direct interview with clients*

from the various clinical records, and interviews were conducted with each clinic's outreach staff

As a consequent of the office study, the sampling frame of clients was constructed and a list of eligible clients was produced for use in arranging home visits. At least two attempts were made to contact each of the clients enrolled in the study at their home, using locator information obtained from CSI records. If the clients were available for interview, their consent was requested and (if given) a standardized questionnaire was utilized for conducting the interview. The questionnaire (which is available from the CDC office in Cairo) included information that was either not mentioned in CSI records on the client, or that was not treated in sufficient detail.

The client questionnaire was composed of five sections: (1) client and clinic identifiers, (2) socio-economic and demographic characteristics, including pregnancy history, (3) regularity of CSI visits and reasons for dropping out of the CSI system, (4) detailed contraceptive use history, (5) opinions on CSI services.

The "Office Study" element was conducted during September 18 to October 7, 1993, and the home interviews of clients from the two cohorts were conducted during November and December, 1993.

D. SAMPLING RESULTS AND RELIABILITY

The results from the sampling procedures for the Office Study, Home Interviews and Data Editing procedures (where non-eligible cases were eliminated from analyses) are presented in this section. The consistency of information collected in the Office Study element and Home Interviews is discussed as well (on such indicators as mean age, parity and educational level of the clients).

1. Completion Rates in the Office Study

Files were available for 2,954 clients from the desired sample size of 3,010 (98% of the desired sample size was selected for contact) As is presented in Table 4 (below) the missing client files occurred in only 6 out of the 26 clinics It is noteworthy that 99% of the client files for the 1990 cohort were available, whereas 97% of the client files for the 1989 cohort were retrievable

Table 4
Number of Clients covered in different stages

Center	Desired Sample size	No of Client files located in office study		No of clients interviewed		No of completed Questionnaires included in Study	
		No	%	No	%	No	%
Tanta	130	122	93.3	82	67	79	96.3
El Mansorah	149	149	100.0	111	74	111	100.0
El Agouza	37	32	86.5	21	66	212	100.0
Menia	79	72	91.1	53	74	53	100.0
Asut	107	107	100.0	94	88	88	93.6
Sohag	118	118	100.0	99	83	96	98.0
Shots	422	338	91.9	218	56	217	99.5
Kafr El Sheikh	141	141	100.0	110	78	107	97.3
El Zagazik	257	257	100.0	162	63	162	100.0
Banha	253	253	100.0	178	70	176	98.9
Samanod	39	39	100.0	34	87	34	100.0
Zefta	55	55	100.0	43	78	42	97.7
El Mahalla El Kobra	91	91	100.0	67	74	66	98.5
Belkas	60	60	100.0	51	85	51	100.0
Sherbeen	74	74	100.0	65	88	65	100.0
Al Saff	68	68	100.0	62	91	62	97.0
Al Ayat	73	73	100.0	67	92	65	99.3
Beni Suef	208	207	99.5	151	73	150	100.0
Matay	36	36	100.0	35	97	35	100.0
Malawy	46	46	100.0	40	87	40	100.0
El Badary	45	45	100.0	40	89	40	98.7
Abo Teeg	82	82	100.0	79	96	78	100.0
Tahta	28	28	100.0	24	86	24	100.0
El Balyana	85	84	98.8	82	98	82	97.8
Tama	94	94	100.0	89	95	87	94.7
Kena	233	233	100.0	207	89	196	
Total	3010	2954	98.1	2263	76.6	2227	98.4

Table 5
Number of Client Files with Complete Status Forms,
by Location and Type of Centers

Center Location	No of Existing Files			% with Complete Status Forms		
	Cohort 1	Cohort 2	Total	Cohort 1	Cohort 2	Total
Lower Egypt	271	1358	1629	89.3	99.8	98.0
Upper Egypt	329	996	1325	98.2	99.1	98.9
Center Type						
Primary	600	1479	2079	94.2	99.5	98.0
Satellite	—	875	875	—	99.4	99.4
Total	600	2354	2954	94.2	99.5	98.5

Two types of client forms were particularly important for the study (and for the smooth functioning of CSI clinics) Client Status and Client Counseling Forms. Tables 5 and 6 present results that show there were large differences in the availability of these two forms. Approximately 98% of the Client Status Forms could be retrieved by the data collection teams, yet only approximately 16% of the Client Counseling Forms could be located. There was a large variation in the completion of the Client Counseling Form across centers and governorates. Satellite clinics were observed to make much better completion of the Client Counseling Form than Primary Clinics (49% of the forms from satellite clinics were available as opposed to only 2% from primary clinics). Clinics in the Upper Egypt strata also made better completion of the Client Counseling Form than clinics in Lower Egypt. It may be noted here, however that counseling forms have been formally initiated in the project in the last quarter of 1989.

Information from the Client Drop Out Forms was also abstracted. These results (not presented) indicated approximately 21% of the clients who stopped using CSI clinics during the reference period were contacted by an outreach team member, (389 Follow - Up Forms were found in client files, whereas results showed that 1,849 clients stopped using CSI clinics during the study period).

Table 6
Number of Clients Files with Complete Counselling Forms
by Location and Type of Centers

Center Location	No of Existing Files			% with Complete Status Forms		
	Cohort 1	Cohort 2	Total	Cohort 1	Cohort 2	Total
Lower Egypt	271	1358	1629	1.5	10.8	9.3
Upper Egypt	329	996	1325	0.3	32.2	24.3
Center Type						
Primary	600	1479	2079	0.8	2.7	2.2
Satellite	—	875	875	—	48.9	48.9
Total	600	2354	2954	0.8	19.9	16.0

2. Non-Response Rate to Home Interviews

Home visits were made to each of the 2,954 clients enrolled in the study (using the results of the Office Study element). At least two visits were made to a client's home if she was not contacted initially, in some cases clients were sought out at another address (e.g., relative's home). 76.6% of the enrolled clients were successfully contacted for interviews (n = 2,263). This is a very good response rate for studies of this type (prospective cohort study)¹. Less than 1% of the 691 clients who were not interviewed actually refused to participate in the study (Figure 2), alternatively this results shows that only 0.2% of the total sample refused to be interviewed. Among the other reasons for failing to include a client in the study were false addresses on the client records moved elsewhere (20% for each). There were substantial differences in the response rates according to the type of CSI centers. Clients selected from centers in Upper Egypt were more likely to be contacted and accept to be in the study than from Lower Egypt (14% non-response rate vs 31% non-response rate respectively). Clients from Satellite clinics were more likely to be successfully contacted than clients from Primary

¹ For example, in an international post-partum panel study the response rate was 63.5% and in other studies in Mexico and Colombia only 43% of the clients were interviewed (J. Bailey and A. Keller "Post Family Planning Acceptance and Experience in the Caribbean" Studies in Family Planning, 13,2,1982)

clinics (11% non response rate vs 29% respectively)
 Since the clients were contacted using information recorded on the CSI client forms the accuracy of the locator information and, hence, the quality of the client record keeping system is reflected in these results

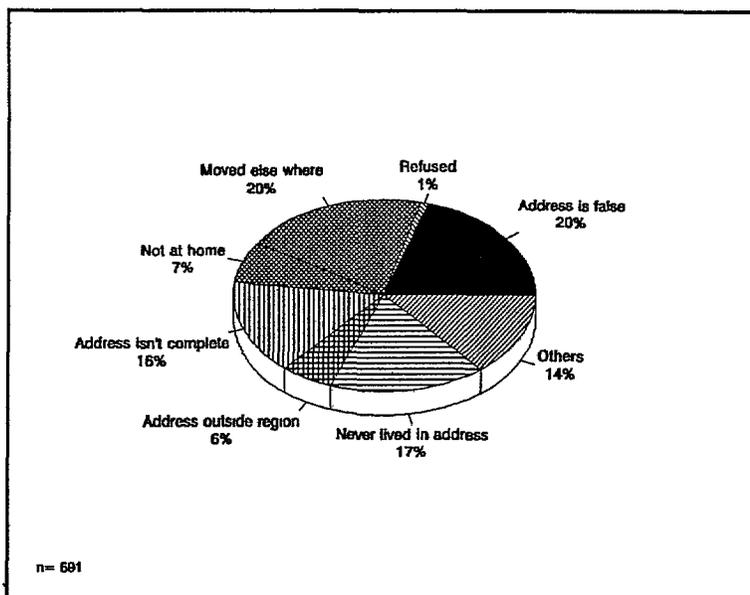


Figure 2 Reasons for Failure to Enroll Selected Clients in the Study

3. Non - Eligible Cases (Office Editing)

Once the data collection phase of the field work was complete a thorough and comprehensive review of each questionnaire was undertaken at CDC offices. During this phase of the data analysis (labelled "Office Editing") each case was screened to verify that the client met the eligibility criteria for inclusion in the study (i.e., that she was a CSI Family Planning Client and joined CSI in January 1989 or January 1990). 2,227 clients out of the 2,263 home interviews met these criteria (98.4% of the home interviews were included in the study). Several reasons were given for dropping the 16% who were found to be non-eligible, including pregnancy at the time of enrollment in the study (e.g., not contracepting), did not begin using the CSI family planning services in January 1989 or January 1990. The 2,227 cases that were found to be eligible for inclusion in the study represent 74% of the original sample size, which is considered as the study's overall completion rate.

4 Reliability of the Data

Because there was overlap in the types of information collected between the clinic records data set and the client interviews it was possible to compare the characteristics of eligible clients selected for interview but who were not successfully contacted during the field work (n=727) and those eligible clients who were actually interviewed (n=2,227). There were no significant differences observed between those clients who were not interviewed and those who were (except in the contraceptive method mix of the two groups). This analysis greatly strengthens the reliability of the client home interviews, and lends credence to results being interpreted as representing the CSI client case load during the period of the study.

A second type of comparison was made in which results from the home interviews were matched to information contained in the clinical records. The results of this comparison showed that there were no meaningful differences in the information from these two data sources, (some socio-demographic characteristics were different in the home interviews than in the clinical forms, reflecting changes in the clients' lives that were not updated in the clinical forms).

VI. Research Findings

A. RESULTS FROM THE ANALYSIS OF CLINICAL RECORDS

Table 7 shows the number of files that were located for each of the 2,954 clients who were selected for interviewing. During the Office Study data collection activities the teams discovered that not all of these forms contained complete information, and hence the results from the office study are not as complete as the home interview. The principal findings from the analysis of these forms is presented in this section.

Table 7
Number of Clinical Records Available for the Office Study

	Cohort		Total
	Jan 1989	Jan 1990	
Desired number	600	2,354	2954
Status Form	565	2,342	2907
Counseling Form	5	468	473
Follow-up Form	86	303	389

1. Contraceptive Method Mix at First Contact

The distribution of clients by the contraceptive method they first began using indicates that the majority of the CSI clients started using the IUD (62% in the 1/89 cohort and 54% in the 1/90 cohort), (see Figure 3)

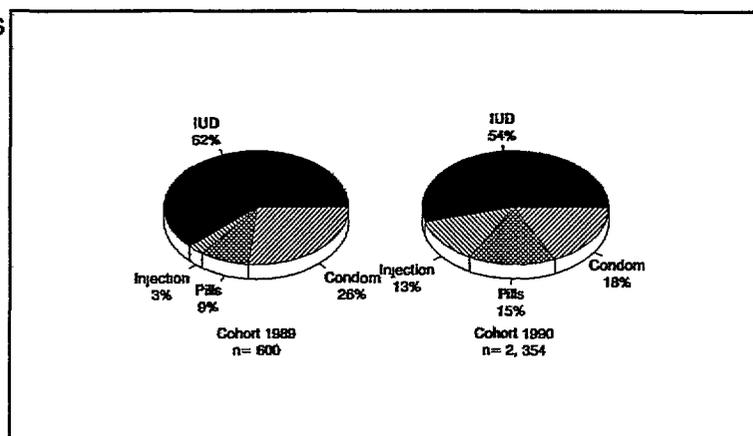


Figure 3 Distribution of Clients of each Cohort by Method First Used

2. Demographic Characteristics

The results presented in Table 8 show that the two cohorts of CSI clients are quite similar with respect to their ages, age at first marriage, duration of their marriages and their parity. The clients' selected for interview in the study are on the average 31 years old, and were 21 years old at first marriage. The mean duration of their marriages is approximately 10 or 11 years, and they generally had less than 4 children at the time they first contacted CSI / were enrolled in this study.

Table 8
Distribution of Clients of each cohort by selected
demographic characteristics

Characteristics	Cohort 1989		Cohort 1990	
	No	%	No	%
Age				
15-	12	2.2	53	2.2
20-	96	16.9	425	18.2
25-	152	26.8	644	27.4
30-	143	25.3	536	22.9
35-	111	19.6	464	20.0
40-	40	7.2	177	7.5
45-	5	1.0	32	1.3
50+	2	0.4	7	0.3
Unknown	4	0.7	4	0.2
Total	565	100.0	2342	100.0
Mean age	31.0		31.0	
Age at first marriage				
<16	55	9.7	324	13.8
16-	184	32.5	883	37.6
20-	227	40.1	830	35.5
25-	81	14.3	263	12.1
30+	14	2.5	21	0.8
Unknown	4	0.7	21	0.9
Total	565	100.0	2342	100.0
Mean	20.9		20.6	
Duration of marriage				
<5 years	158	27.1	541	23.2
5-	159	28.2	570	24.3
10-	116	20.6	537	22.9
15-	79	14.0	377	16.1
20+	51	9.1	299	12.8
Unknown	2	0.4	18	0.8
Total	565	100.0	2342	100.0
Mean	9.9		11.1	
Living Children				
1-2	201	36.7	779	34.5
3	126	22.9	486	20.9
4	101	18.4	399	17.2
5	57	10.4	283	12.2
6	37	6.8	179	7.7
7	14	2.6	99	4.2
8+	12	2.2	76	3.3
Total	548	100.2	2321	100.0
Mean	3.9		4.2	

3 Socio-Economic Characteristics

The January 1989 cohort is slightly better educated than the January 1990, and both of the cohorts are better educated than the general population (as is the case with CSI clients who are known to be of a higher socio-economic level than the general Egyptian family planning client), see Table 9. It is noted that there are a significant number of cases for which the educational status was not recorded on the clinic forms. Corresponding to the relatively high educational status is a relatively large proportion of clients in both cohorts who are currently working. Compared with data of EDHS 1992, CSI clients are better educated: 35% attained completed secondary education or higher vs 25% for the national average. They are also more likely to be currently working compared with the national sample.

Table 9
Distribution of clients of each cohort by selected
Socio-economic characteristics at admission

Characteristics	Cohort 1989		Cohort 1990	
	No	%	No	%
Educational Status				
Illiterate	113	20.0	935	39.9
Read and write	21	3.7	224	9.6
Low than medium	33	5.8	209	8.9
Medium	169	29.9	466	19.9
Above medium	28	5.0	71	3.0
University & above	76	13.5	201	8.6
Not known	125	22.1	160	6.8
Not classified	—	—	76	3.2
Total	565	100.0	2342	100.0
Work Status				
Work	202	35.8	477	20.4
Does not work	358	63.3	1854	79.2
Not known	5	0.9	11	0.4
Total	565	100.0	2342	100.0

4. Other Information in the Status Form

Approximately 98% of the clients status forms indicated an approval of a home visit by a social worker. It is noteworthy that the only category of clients who took exception to the value of home visits was in the case of CSI clients whose husbands did not know they had sought family planning services. Of those

clients whose husbands were unaware of their actions (n=32), only 6% stated that they did not welcome a home visit by the social worker

B. RESULTS FROM THE CLIENT INTERVIEWS

In this section the principal findings from the client interviews are presented. The presentation begins with an overview of the clients' socio-demographic characteristics. Indicators of the sustained use of CSI services and the dynamics of contraceptive use (including method specific continuation and failure rates) are presented in the main body of this section. The findings of questions that probed into CSI clients satisfaction with the CSI services in general, and with the outreach teams, are presented last.

It is important to note that the findings relating to contraceptive use dynamics are reported only for the January 1990 cohort, for two reasons. First, it is not advisable to lump together both cohorts for an analysis of their use dynamics, since the January 1989 cohort was studied for a longer reference period than the January 1990 cohort. Second, the use dynamics results are reported only for the January 1990 cohort because the January 1989 cohort was simply too small to provide enough power for the statistical analyses to be valid. The results from the two cohorts are either grouped together, or reported separately for all of the indicators in this section.

1. Client Characteristics and Fertility Intentions

These findings are somewhat different from the results obtained from the Office Study element, as they are based on the clients' characteristics at the time of the interview, i.e., 5 years after the first contact with the CSI clinic.

Residence

Approximately 67% of the clients in the study's sample come from urban areas, whereas approximately one-third come from rural areas. As Figure 4 shows, the proportion of clients coming from urban and rural areas does not differ substantially by the region (Lower & Upper Egypt)

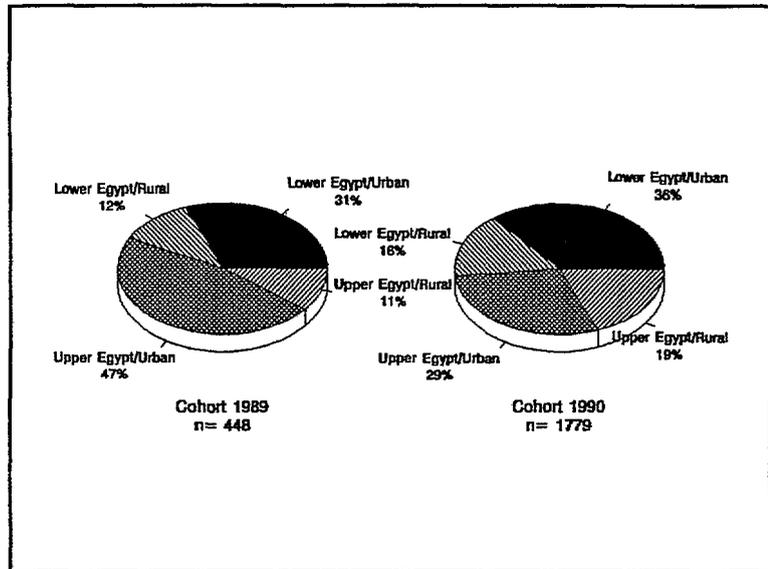


Figure 4 Percent Distribution of clients by Cohort & Region of Residence

Demographic Characteristics and First Contact Contraceptive Use

Table 10 (below) shows that almost three quarters of the clients are between 25 and 39 years of age, with the remainder being over 40 years old. The overall mean age for the study's sample is 34.3. The vast majority of the clients were married (88%) before the age of 25, and approximately 16% were married before they were 16 years old. The mean age at marriage for this sample was 19.5 years old, and almost all of the clients in the study are married (99%). The mean number of living children at the time of the interview for the study's sample was 3.83 for the 1/89 cohort, and 3.99 for the 1/90 cohort. Almost

Approximately one third of clients in the study came from rural areas. And about three quarters of the clients are between 25 and 39 years of age.

two-thirds of the CSI clients in this study began their use of a contraceptive method with the IUD (65%), followed by oral contraceptives (15%).

Table 10
Percent distribution of clients by cohort and selected demographic
and contraceptive use characteristics at the time of interview

Characteristics	Cohort 1989	Cohort 1990	Total	
			%	No
Total number of clients	448	1779	--	2227
	20 1	79 9	100	--
<u>Current age of clients</u>				
<20	--	0 1	0 0	1
20-	3 6	6 0	5 5	122
25-	18 1	21 0	20 4	455
30-	26 7	25 6	25 9	576
35-	25 9	24 5	24 7	551
40-	18 1	15 7	16 2	361
45-	6 5	5 8	6 0	133
50+	1 1	1 3	1 3	28
Mean	35 1	34 1		34 3
<u>Age at first marriage</u>				
<16	10 9	16 9	15 7	344
16-	35 9	40 3	39 5	879
20-	35 8	31 9	32 6	727
25-	14 5	9 1	10 2	227
30+	2 0	1 0	1 2	27
Not stated	0 9	0 8	0 8	18
Mean	20 4	19 2		19 5
<u>Marital Status</u>				
Married	99 4	98 2	98 7	2199
Widowed	0 4	1 1	1 0	22
Divorced	0 2	0 3	0 3	6
<u>First method used</u>				
IUD	75 1	62 2	64 9	1443
Injection	4 0	12 9	11 1	248
Pill	10 0	16 3	15 0	335
Condom	10 9	8 6	9 0	201
<u>Mean No. of children</u>				
Ever born	4 29	4 58	--	--
Living	3 83	3 99	--	--

Socio-Economic Characteristics

The results presented in Table 11 (below) indicate that majority of the CSI clients in the study are literate (only 35% of the women and 21% of their husbands are illiterate), and are, overall, fairly well educated (35% of the clients reported completing secondary school or higher) The mean numbers of formal schooling for the clients in the study is 6 2 years, and 8 1 years for their husbands The

majority of the clients are working in the service sector (79%), and their occupations are more likely to be manager/professional, or clerical/technical assistants (43% and 47% respectively)

Table 11
Percent distribution of clients according to selected socio-economic characteristics for them and their husbands at time of interview

Socio-Economic Characteristics	Wife		Husband	
	%	No	%	No
Education				
Illiterate	35.7	796	20.8	457
Less than Primary through Secondary	17.2	382	17.7	389
Completed Secondary	11.8	263	12.9	283
Higher than Secondary	21.8	485	23.0	507
Higher than Secondary	13.5	301	25.6	563
Mean Years of Education	6.2		8.1	
Work Status				
Currently Working	30.8	685	97.2	2079
Not Currently Working	69.2	1542	2.8	60
Economic Activity				
Agriculture	3.6	25	11.1	238
Industry	15.9	109	43.3	925
Services	79.3	543	43.6	933
Other	1.2	8	2.0	43
Occupation				
Manager & Professional	43.4	297	37.3	800
Clerical, Technical assistant, Sales and Services	46.6	319	26.4	563
Workers of production & Agriculture	10.0	69	36.3	776

Client Characteristics by the First Contraceptive Method Used

The socio-demographic characteristics of clients differ somewhat according to the type of contraceptive method they initially began using. Clients who began using an injectable contraceptive are generally older than clients of other methods (mean age is 36.5 years). There is no significant difference in the ages of pill and IUD users (mean age is 32.8 and 33.8 years respectively) (Figure 5)

Corresponding to their relatively high age, clients who began with an injectable contraceptive also have lower levels of education (4.3 years on the average, compared to a mean of 6.2 years for IUD users, 6.4 for condom users, 4.9 for pill users)

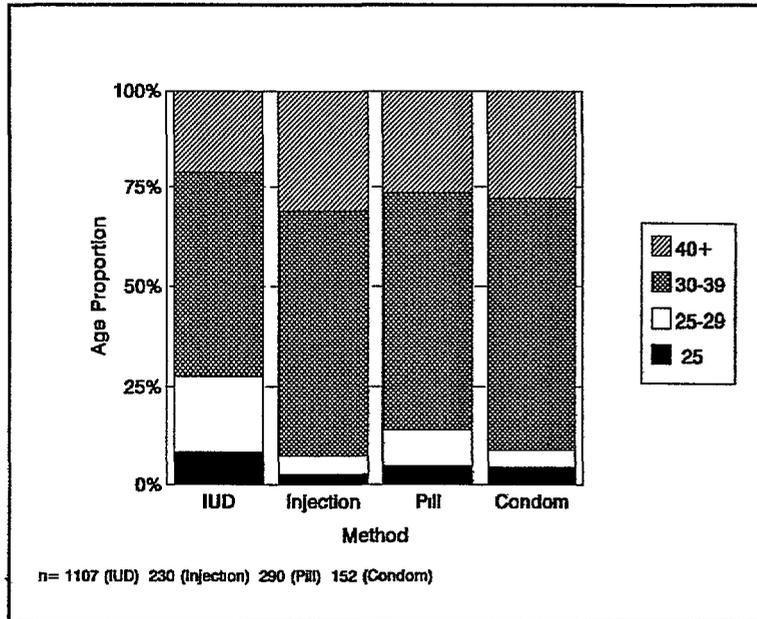


Figure 5 Distribution of Clients of 1990 Cohort by First method used & Age

Fertility Intentions

This figure shows that a large majority of clients (in both cohorts) stated that they did not want any more children (90% of the clients in the 1/89 cohort, and 88% of the clients in the 1/90 cohort) Of those clients who desire more children, approximately one

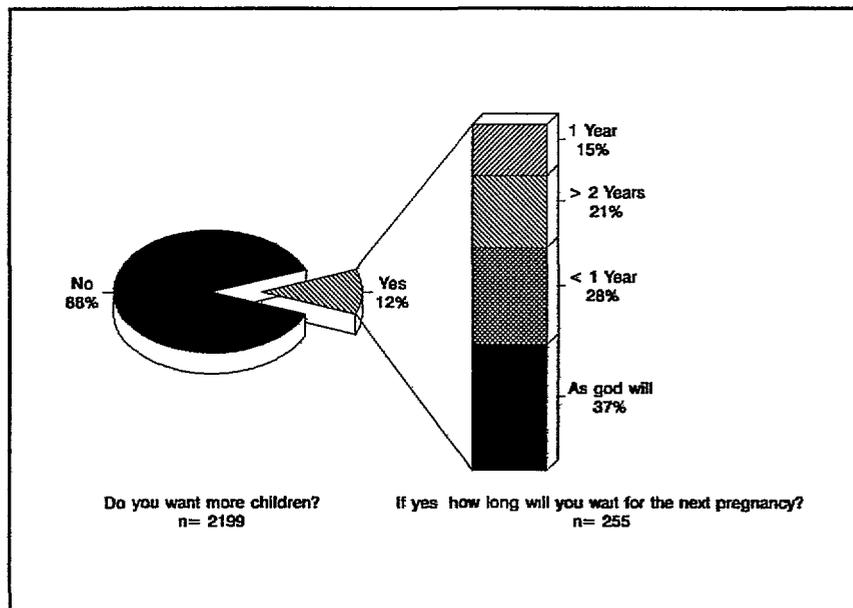


Figure 6 Percent Distribution of Currently Married Clients by Fertility Intention

quarter (28%) want to become pregnant within a year, and an additional 15% desire their next pregnancy after just one year. These results suggest that a sizeable proportion of CSI clients do not desire any more children and are hence, using contraceptive for limiting purposes. Of those clients who desire another

pregnancy, however, the CSI clinics are being used for short term spacing

2. Patterns of Contraceptive and CSI Service Use

This section presents findings that show the regularity of client contacts with CSI clinics -- the continuity of method or CSI service use, and the reasons for stopping the use of CSI clinics. The experiences of the clients from both cohorts (1/89 and 1/90) are pooled together in this section, and three types of clients are examined

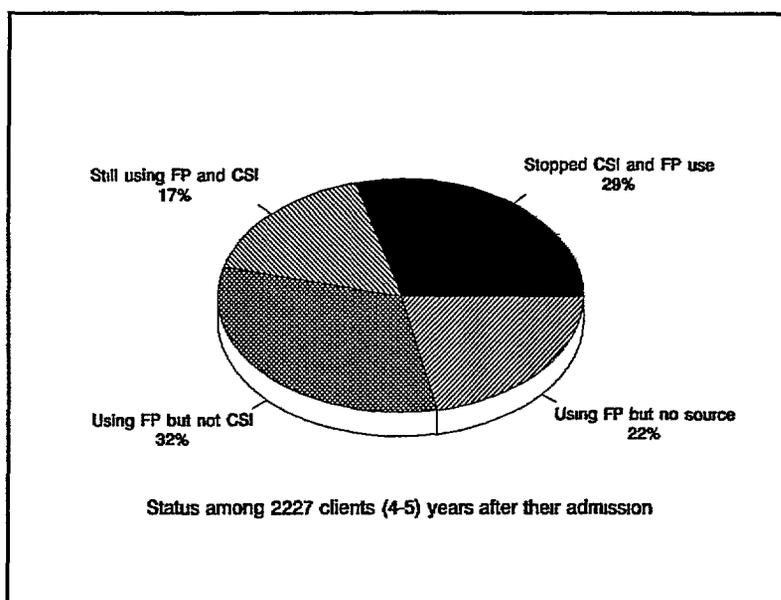


Figure 7 Contraceptive Use and CSI Service Use

- Clients who are using a contraceptive method but no longer using a CSI clinic, including
 - Clients who have changed sources for family planning services
 - Clients who have not changed sources for family planning yet continue to use a contraceptive method (e.g., IUD users who have no problems and fail to return for annual exams)
- Clients who are no longer using a contraceptive method (and hence, no longer using a CSI clinic)
- Clients who are using a contraceptive method and continue to use a CSI clinic

It was observed that not all of these clients remain faithful CSI user. For example, fewer than 1 CSI client in 5 is still using both a contraceptive method and CSI services after 5 years.

Approximately 71% of CSI clients are still using a contraceptive method 5 years after their initial contact.

Approximately one half (54%) of the contraceptive users have either shifted to another source of family planning services (32%) or are not regularly visiting any family planning service (22%). Slightly fewer than one third (29%) of the CSI clients are no longer using either a contraceptive method or CSI services.

Use by Type and Location of Center Initially Visited

Table 12
Percent distribution of clients according to their status group by selected classifications

Categories	% of clients stopped visiting CSI centers			% of Clients still visiting CSI centers	Total		
	Currently using FP no services	Non-CSI	Not using FP		Sub-Total	%	No
Cohort							
1989	21.2	31.7	30.4	83.3	16.7	100.0	448
1990	22.0	32.1	28.9	83.0	17.0	100.0	1779
Type of Clinic							
Primary	23.5	34.0	27.2	84.7	15.3	100.0	1456
Satellite	18.7	28.1	33.1	79.9	20.1	100.0	771
Region of residence							
Lower Egypt							
Urban	27.8	33.5	21.6	82.9	17.1	100.0	777
Rural	27.3	31.3	21.9	80.5	19.5	100.0	333
Upper Egypt							
Urban	16.0	33.1	35.9	85.0	15.0	100.0	729
Rural	16.0	37.0	38.1	81.7	18.3	100.0	388
Total	21.8	32.0	29.2	83.0	17.0	100.0	2227

Table 12 presents an overview of the 2,227 CSI clients continuity of method and service use broken down by the type of clinic they initially visited and the residence of clients. Overall there do not appear to be large and significant

differences across the types of initial CSI contact point, yet minor and interesting differences do emerge. For example, a client who visited a CSI satellite clinic is more likely to be still visiting the same clinic after 5 years (20%) than a client who visited a CSI primary clinic (15%). CSI clients in upper Egypt are more likely to have stopped using a contraceptive method within the 5 years after initial contact (37%) than CSI clients from lower Egypt (22%).

Number of CSI Clinic Visits

The mean number of visits to CSI clinics by clients who had their first visit either during January 1989 or January 1990 are presented in Table 13. These findings predictably show that clients who had a sustained use of a contraceptive method and who continued with CSI clinics had the highest average number of visits per year. It is interesting to note that the average number of visits during the first year are about the same, regardless of whether the client was currently using a contraceptive after 5 years. This suggests that most CSI clients kept using the method and the service during the first year.

Table 13
Mean Number of Visits to CSI centers according to
Contraceptive Use & CSI Service Use by Cohort

Cohort/ Year	Mean visits among clients stopped visiting CSI centers		Clients still Visiting CSI Center
	Currently using FP	Currently not using FP	
1989 Cohort			
During 1989	2.3	2.4	2.6
During (1990-1993)	1.1	1.4	4.5
No. of Clients	(237)	(136)	(75)
1990 Cohort			
During 1990	2.4	2.6	3.1
During (1991-1993)	0.9	1.5	4.9
No. of Clients	(961)	(513)	(304)

3 Reasons for Continuity of CSI Contacts

CSI clients who are using an IUD, oral or an injectable contraceptive commonly cite one of two principal reasons for continuing to use CSI project clinics. The most frequently cited reason is for regular follow-up and to check with any related problems. The second most frequently cited

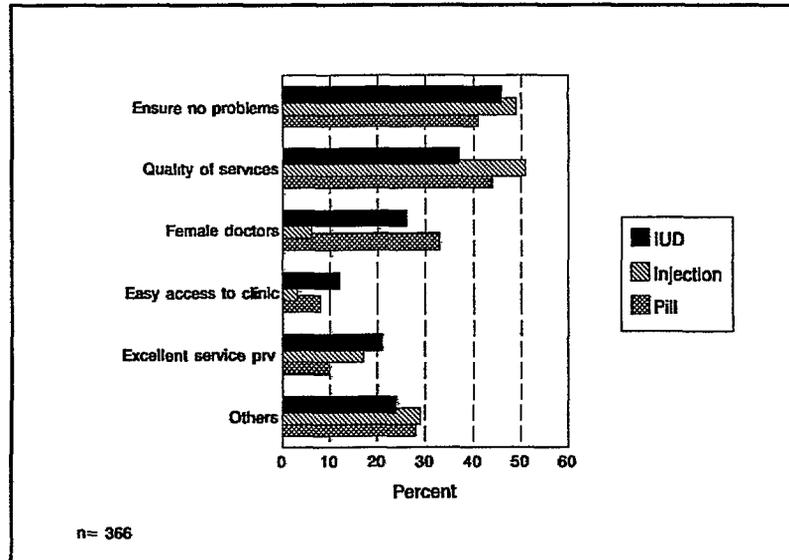


Figure 8 Reasons for continuing to use CSI clinics according to type of method used

reason is because of the good quality of services CSI provides. It is interesting to note that the availability of a female physician is more important for IUD and pill users than injectable contraceptive users.

4. Shifting to other Family Planning Providers

Table 14 and Figure 9 (below) show that the highest proportion of clients who changed their source of family planning services away

Availability of female doctors were among the prime reasons for continuing to use CSI services, while ease of access was among the major reasons for changing from CSI to another source.

from CSI were most likely to have changed to a commercial pharmacy (45% of the CSI clients who changed sources), and to a private physician (25% of the CSI clients who changed sources). Very few clients changed to another CSI clinic (2%).

Table 14
Percent distribution of clients who stopped visiting CSI centers
and obtained family planning methods from other sources

Sources of Obtaining FP Services	Place of Residence				Total
	Lower Egypt		Upper Egypt		
	Urban	Rural	Urban	Rural	
Another CSI centers	12	48	08	56	22
Pharmacy	393	375	523	477	447
FP clinic	96	125	50	75	81
Hospital	85	67	66	37	69
Private doctor	287	212	237	196	246
Rural Health unit	12	115	29	103	46
MCH	50	10	58	47	46
Other	66	48	29	09	42
Total	1000	1000	1000	1000	1000
% No	260	104	241	107	712

Reasons for Shifting

The results presented in Table 15 show that the majority of clients who obtained their methods from either a pharmacy, another CSI clinic, a family planning clinic or rural health unit most commonly cited the ease of access to the source as the major reason for their change away from the initial CSI clinic. Clients who changed

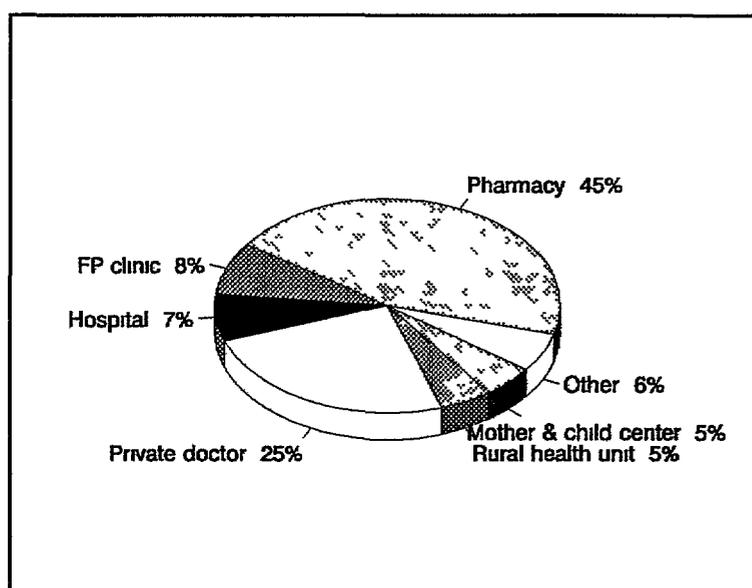


Figure 9 Percent distribution of Clients who stopped visiting CSI centers and obtained family planning methods from other sources

from the CSI clinic to a private physician value easy accessibility, high quality of services and the qualification of the family planning service provider. The cost of services and the easy access represent the major reasons for changing away from CSI to an MCH center.

Table 15
Percent of clients reporting various reasons for their shifting
to other Family Planning Sources by type of Source

Reasons	Type of Source								Total
	Another CSI Center	Pharmacy	FP Clinic	Hospital	Private Doctor Clinic	Rural Health Unit	MCH Center	Other	
Easy access to new source	87.5	96.2	81.0	36.7	32.0	87.9	51.5	50.0	70.5
Good quality of services	6.3	0.6	8.6	18.4	32.6	—	3.0	3.3	10.7
Cost of services is suitable	—	7.3	13.8	22.4	4.0	12.1	51.5	50.0	12.0
Availability of other services	6.3	—	—	20.4	6.3	—	12.1	—	3.7
High qualification of service's provider	6.3	1.3	3.4	18.4	33.1	3.0	9.1	6.7	11.3
Other	—	1.9	5.2	8.2	13.1	6.1	3.0	16.7	6.2
No of Cases	16	318	58	49	175	33	33	30	712

Note: This table is derived from a question of more than one answer

Frequency of Contacts with CSI Clinics

Table 16
Percent distribution of clients who are still visiting CSI centers
according to whether they follow the scheduled visits or not
by cohort, type of center and residence

Variables	At schedule	When needed	Total	
			%	No
Cohort				
1989	13.3	86.7	100.0	75
1990	31.0	69.0	100.0	303
Type of center				
Primary	22.9	77.1	100.0	223
Satellite	34.2	65.8	100.0	155
Residence				
Lower Egypt				
Urban	25.6	74.4	100.0	133
Rural	23.1	76.9	100.0	65
Upper Egypt				
Urban	25.7	74.3	100.0	109
Rural	38.0	62.0	100.0	71
Total	27.5	72.5	100.0	378

Out of the 17% of the CSI clients who were still using the initial CSI source after 5 years, the majority reported that they do not visit CSI clinics on a schedule, but that they only go when needed (see Table 16). Interesting differences emerge, however, among those clients who do maintain a regular schedule of contacts with

CSI clinics Clients who visit the CSI clinics on schedule are more likely to have begun using the services more recently (the 1/90 cohort), have the first contact with a satellite clinic, and reside in rural areas of Upper Egypt

Client Follow-Up. CSI Outreach Services

Out of the 1, 849 clients who stopped using CSI services during the past 5 years, only 214 clients (12%) reported on a contact with CSI outreach services Figure 10 shows the timing of this contact according to the contraceptive use status of the client

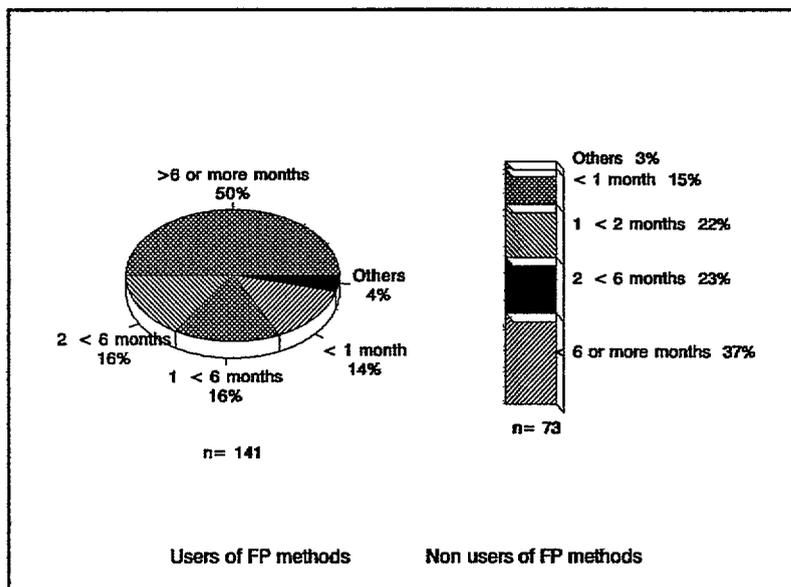


Figure 10 Date of Last Contact by CSI Outreach Workers

Approximately 15% of the clients who were contacted reported that the follow-up contact occurred within one month of the missed CSI appointment Close to half of clients who were contacted reported that the follow-up contact occurred after at least 6 months

5 Patterns of Changing Contraceptive Methods

This section presents findings based on the experiences of the January 1990 cohort, since the January 1989 cohort was too small a sample for statistical analyses Each client is followed beginning with her first use of a contraceptive method (i e , January 1990) until she stops using a (any) contraceptive, or until the 4 year follow-up period is complete (i e , the time of the interview)

The data analysis, and the presentation of the findings that follow, divided the sample of clients into 4 groups, based upon their contraceptive use histories. There is one client type who is a 'continuer' (i.e., client who continues either with the same or a different contraceptive method) and there are three client types who are 'discontinuers' (clients who stopped using a contraceptive) are identified in this analysis.

- Clients who continually use the same contraceptive method during the 5 year follow-up period (*Continuer*)
- Clients who stop using all contraceptives (*Terminated*)
- Clients who temporarily stop using a contraceptive method but begin again using the same method sometime during the 5 year follow-up period (*Resumed*)
- Clients who change contraceptive methods during the 5 year follow-up period, with the possibility of a break in use (*Switched*)

All of the clients included in the study were asked about their contraceptive practices during the time since they first began using a CSI clinic (i.e., the past 5 years). As mentioned above, only the clients from the January 1990 cohort are examined in this section, due to size of the sample. Just about all of the clients experienced several changes in their contraceptive practices during the study. The results presented in this first section of Patterns of Changing Contraceptive Method Use show the experiences for the first five changes, using a type of life table analysis.

Table 17
Method Use History Across Five Changes in Contraceptive Use Status

Segments of Contraceptive Use Status	Continuer		Terminated		Resumed		Switched		Total Number of Clients Before Change		No of Clients remaining *
	N	%	N	%	N	%	N	%	N	%	
January 1990											1,779
First	465	26	312	18	307	17	695	39	1,779	100	1,002
Second	528	53	148	15	67	7	259	26	1,002	100	326
Third	191	59	45	14	19	6	71	21	326	100	90
Fourth	52	58	10	11	14	15	14	15	90	100	28
Fifth	17	61	3	11	2	7	6	21	28	100	8
Sixth	5	62.5	3	37.5	0	-	0	-	8	100	0

* The number of clients remaining is equal to the total number of clients, minus "Continuer" and "Terminated" use, up to the referenced change in contraceptive status' segment

Table 17 shows the method use experiences of the clients across six changes in contraceptive use status. Initially 1,779 clients enter into the first change, out of which 26% emerge as "Continuers" and approximately 18% emerge as "Terminated". These two groups do not change their status again for the rest of the analysis. The two remaining groups of clients (are followed into the second change in contraceptive use status. 17% (n=307) of the clients emerge from the first change of status as "Resumed" and 39% (n=695) as "Switched". These last two groups are followed up until they reach the second change in contraceptive use, which is shown in the next row of Table 17, and so on through the six changes of contraceptive use status.

Another way of presenting these results is shown in Figure 11. The 1,779 clients examined in this analysis had 3,233 changes in contraceptive use during the five years of the study. Out of these 3,233 changes in status, 39% (n=1,258) were still using a contraceptive method after five years. This 39% includes clients who continued with the same method they initially selected, or changed to another method without a break in coverage.

It is interesting to note that of this 39% of continual users, 37% (n=465) relied upon the same method (although their use status changed, the type of method they used did not), 42% (n=528) used two different contraceptive methods and approximately 20% (n=265) used three or more different contraceptive methods

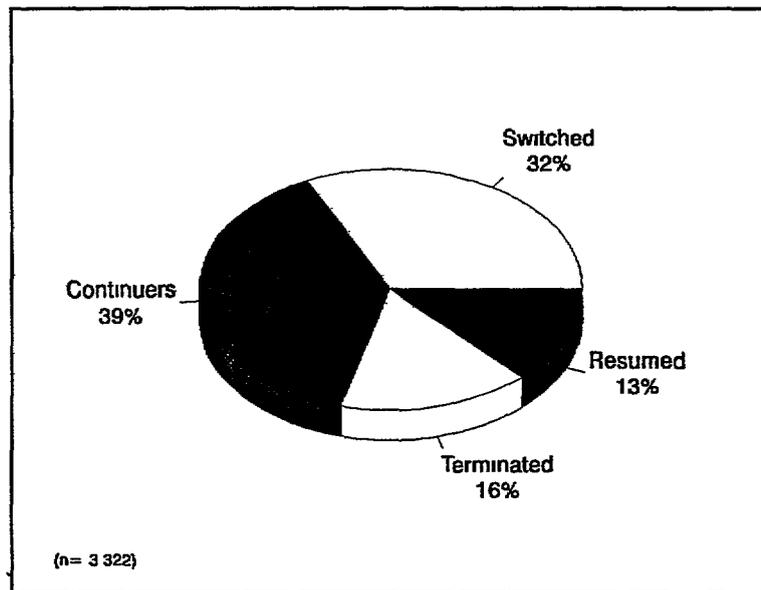


Figure 11 Outcome of Changes in Contraception Use Status

Approximately 16% of the 3,233 changes in contraceptive use status resulted in termination of method use (n=521). This decision to stop using a contraceptive occurred at the first change in contraceptive use for 60% (n=312) of this group, at the second change in contraceptive use for 28% (n=148) of this group, while the remaining 12% (n=61) of the clients who terminated use reached this decision at the third through sixth change in use status.

1,454 clients who changed contraceptive use status during the five years stopped using a contraceptive method only to begin again after some time. Out of the 3,233 changes, 13% (n=409) were clients who stopped use and then began using the same method again (Resumed). 32% of these (1045 changes) resulted in a client changing the contraceptive method (i.e., Switcher). Following this group up more closely, 67% (n=695) stopped and started again methods after the second change in their use status, 25% (n=259) stopped and started again after the third change in their use status.

Reasons for Changing Contraceptive Methods

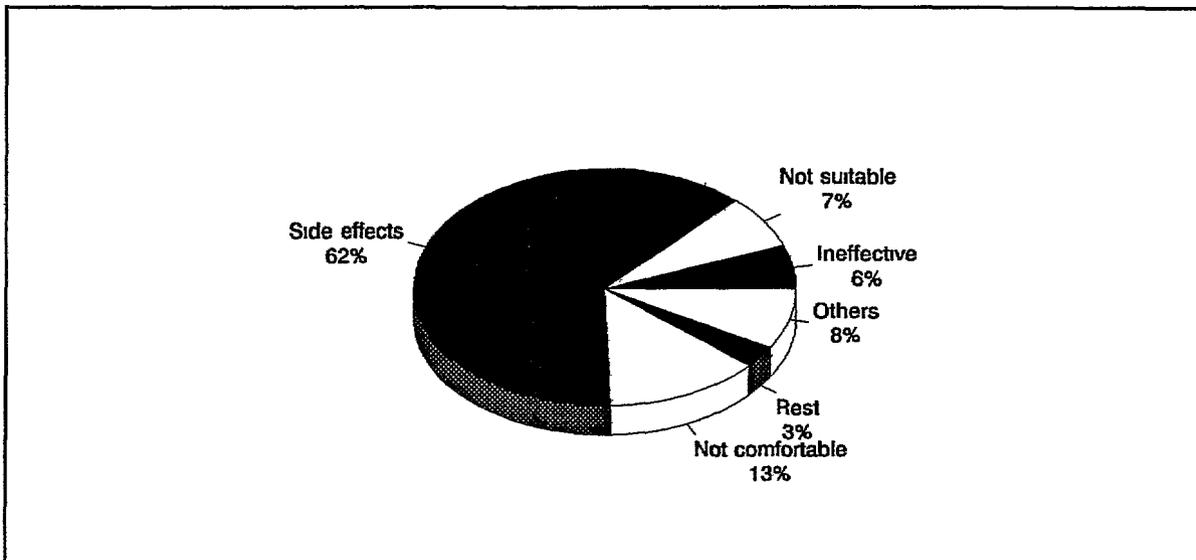


Figure 12 Reasons of Contraceptive method change experienced by clients for the first time, 1990 cohort

The majority of the clients who changed contraceptive methods did so because of side effects (63%), (Figure 12) The second most common reason given for changing contraceptive methods is discomfort (13%) An analysis by method showed the same pattern of results (e g , side effects were the most common reason given for changing any one method), except for clients who were using a condom Condom users most commonly change away from using a condom because the method was not comfortable or because their husband disapproved (37% and 21% respectively of the clients who changed from condoms to another method)

62% of clients of the study sample stated that side effects is the number 1 reason for switching a method

Patterns of Changing Contraceptive Methods

Table 18
Method first and currently used by CSI Clients

Method now used	Method first used					Changers		Non-Changers		Total	
	IUD	Injection	Pill	Condom	Other	%	No	%	No	%	No
IUD	655	72	65	39	0	21	176	79	655	100	831
Injection	27	22	3	4	0	61	34	39	22	100	56
Pill	125	38	94	21	0	66	184	34	94	100	278
Condom	15	15	3	17	0	66	33	34	17	100	50
Other	15	10	5	13	0	100	43	0	0	100	43
Changers	22%	86%	45%	82%	0	37	470				
Non-changers	78%	14%	55%	18%	0			63	788		
Total	100%	100%	100%	100%	0					100	1258

Note: Number of clients between brackets were using the same method and are considered as non-changers between the first and current method used

Four years after their initial contact with a CSI clinic 1,258 clients from the 1,779 were still using a contraceptive method (for 1990 cohort). This section traces the patterns of switching contraceptive methods that this group experienced. Table 18 shows that almost two thirds (63%) of the 1,258 contraceptive users at the time of the data collection were using the same method they first used. Some of this group may have stopped use of the method, or switched to other method during periods within the past four years, but they switched back to the first method used. Clients who began with an IUD were the most likely to end the study period using the same contraceptive method (when they were using a contraceptive) than any other method users. 79% of the clients who were using an IUD at the time of the interview had begun using an IUD 5 years previously. Clients who began using a pill or condom were the least likely to stay with the same method. approximately one third (34%) of these method users were using the same method they first used at the time of interview.

Most of the current IUD users (79%) began using family planning services with an IUD

Approximately 22% of the former IUD users switched to another contraceptive method within the first 5 years of use Figure 13 shows that most of these former IUD users

switched to an oral contraceptive (69%), or an injection (15%) IUD users who began using another type of contraceptive are most likely to have started family planning services by using an injection (41%) or an oral contraceptive (37%)

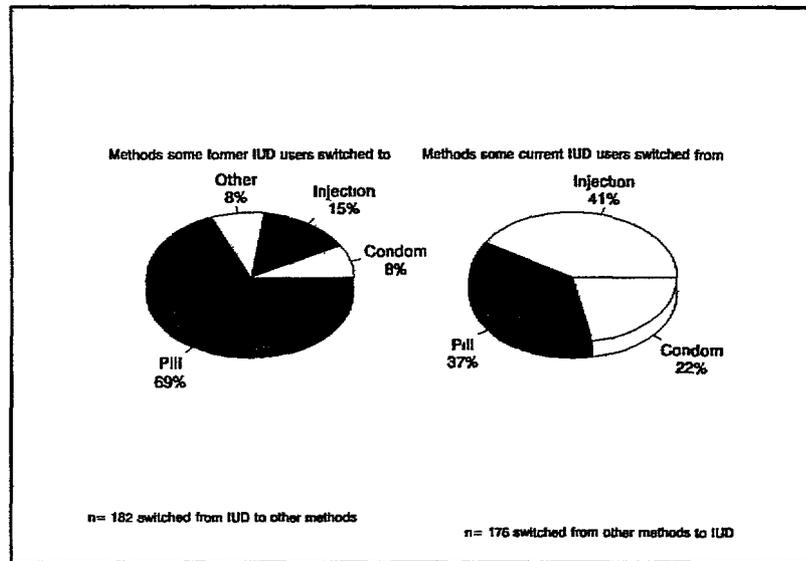


Figure 13 Contraceptive Methods of Past & Present IUD Users

In contrast to the IUD users, clients who are currently using an oral contraceptive are less likely to have begun family planning services with that contraceptive method Only about one third (34%) of the clients currently using a pill actually began use 5 years ago with that method Among those current pill users who switched to the pill from another method,

68% were previously using an IUD 45% of the clients who originally began using the pill switched to another method within the 5 years after beginning

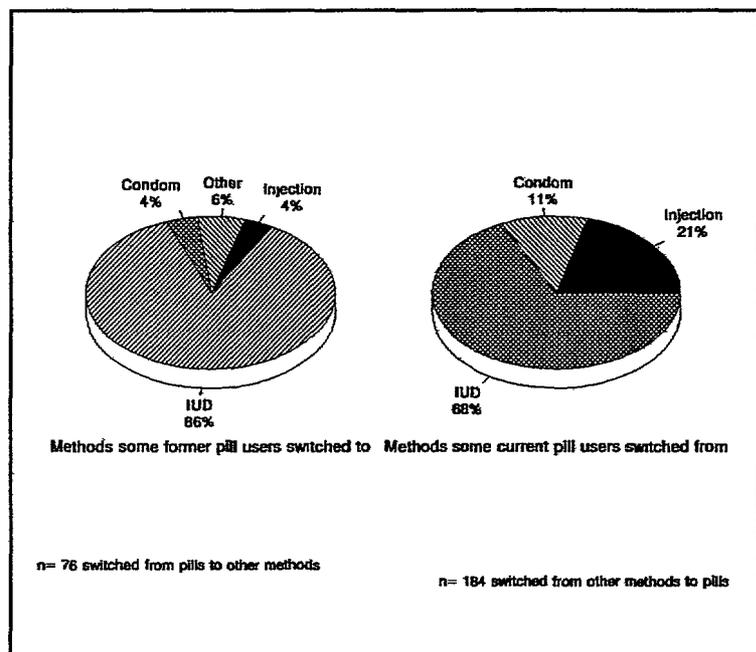


Figure 14 Contraceptive Methods of Past & Present Pill Users

contraceptive use Among those former pill users who changed method, 86% switched to an IUD (Figure 14)

Current users of an injectable contraceptive are slightly more likely to have begun use with the same method than current users of a pill (39% of injectable users began use with that method, as opposed to 34% of pill users), but they are much less likely to have stayed with the same method than are IUD users (79% current IUD users began with that method, as noted above)

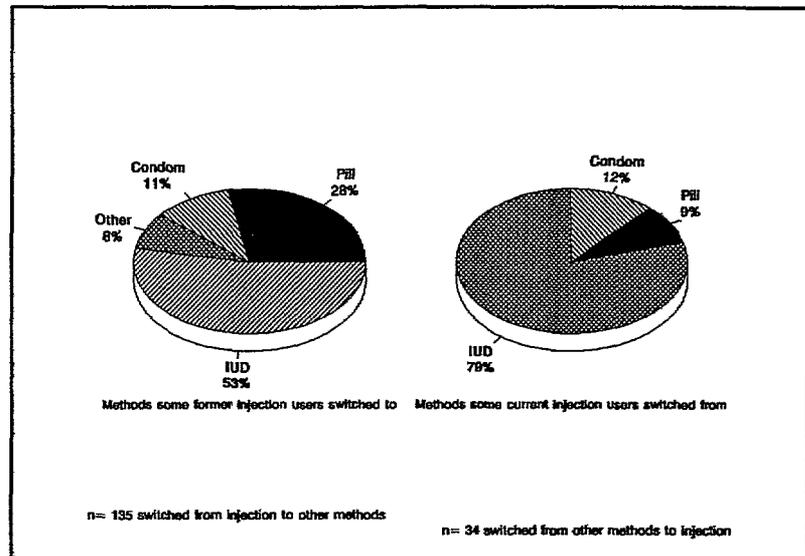


Figure 15 Contraceptive Methods of Past & Present Injection Users

Among those current injection users who switched to the injection from another method, 79% were previously using an IUD 86% of the clients who originally began using an injection switched to another method within the 5 years after beginning contraceptive use Among those former injection users who changed method 53% switched to an IUD and an additional 28% switched to an oral contraceptive (Figure 15)

Net Change among Contraceptive Methods for Clients still using Contraceptives

Table 19
Net change in contraceptive use for clients still using

Method	Now Using	First users	Average users	Changers to	Changers from	Net No	Rate of changers %		
							To	From	Net
Total	1258	1258	1258	470	470	0	—	—	—
IUD	831	837	834	176	182	-6	21.1	21.8	-0.7
Injection	56	157	106.5	34	135	-101	31.9	126.7	-94.8
Pill	278	170	224	184	76	108	82.1	33.9	48.2
Condom	50	94	72.0	33	77	-44	45.8	106.9	-61.1
Other	43	—	—	—	—	—	—	—	—

* Relative to average users

Table 19 presents an analysis of the net change in each method as a result of the change from the first method to the current method

The combined information from Table 19 and Figure 16 show that the IUD gained 176 users from other methods and lost 182 users who changed to another method away from an IUD. The net loss is small, 6 cases representing 0.7% of the mean number of IUD users. Thus the majority of the CSI clients in this study are still using an IUD (66%). It is therefore observed that the majority of

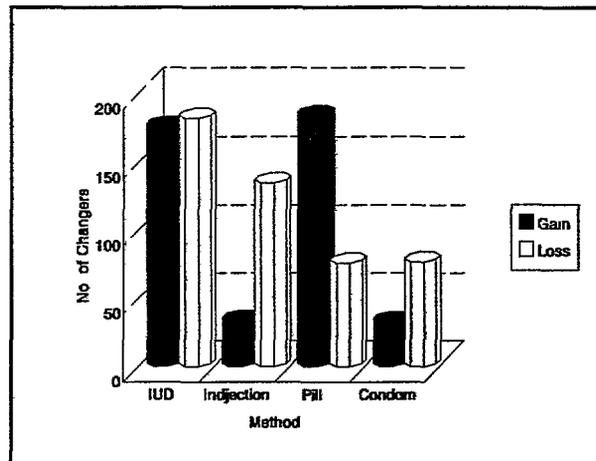


Figure 16 Gain & Loss in contraceptive methods between first & last method used for the clients still using a method

changes to the methods now used were from former IUD users, and the majority of changes from the first contraceptive method used were to current IUD users. This result shows that there was a small net change in IUD use between the first and current use (837 first time users versus 831 current users). In contrast to the IUD, both the injection and condom methods 'lost' the majority of their users (net loss is 95% and 61% respectively). The pill gained the majority of the loss in the other methods (82%) and lost only about one third of its users.

6 Unintended Pregnancies

This section presents results pertaining to extended use failure rates for clients in both cohorts separately. It includes results of percentages of clients who became pregnant during the 5 years between their first contact with CSI and the interview, as well as a life table cumulative extended use failure rate analysis. The analysis first considers pregnancies that occurred at any time after admission and before the interview, regardless of the client's contraceptive use.

Cases of Pregnancy

All of the pregnancies are classified into three categories:

- Intended Pregnancy
- Unintended Pregnancy while using a contraceptive method
- Unintended Pregnancy while not using a contraceptive method

Table 20 (below) and Figure 17 show that among the clients who became pregnant after beginning to use CSI services, 55% of the 1/89 cohort and 49% of the 1/90 cohort reported that they intended to become pregnant. An additional 19% of the 1/89 cohort and 20% of the 1/90 cohort became pregnant unintentionally while using a contraceptive method. Approximately 26% of the 1/89 cohort and 31% 1/90 cohort became pregnant unintentionally during a period when they were not using a contraceptive method.

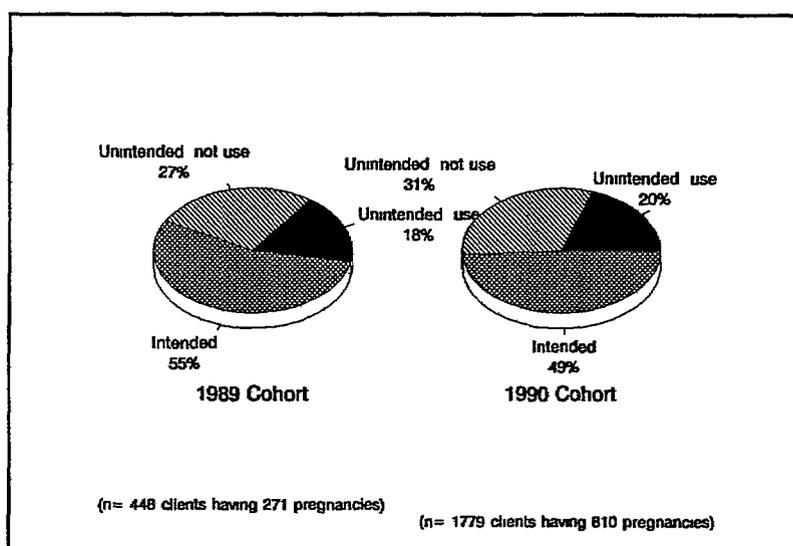


Figure 17 Percentage Distribution of 1989 & 1990 Cohorts Pregnancies

Table 20
Percentage Distribution of number of pregnancies after admission
by Intention & Order of Pregnancy for each cohort

Type of Pregnancy	Order of pregnancy							
	1		2		3+		Total	
1989 Cohort (n=448)	%	No	%	No	%	No	%	No
Intended	54.7	(111)	47.4	(27)	90.9	(10)	54.6	(148)
Unintended while using	19.2	(39)	17.5	(10)	0.0	(0)	18.1	(49)
Unintended while not using	26.1	(53)	35.1	(20)	9.1	(1)	27.3	(74)
Total	100.0	(203)	100.0	(57)	100.0	(11)	100.0	(271)
1990 Cohort (n=1 779)								
Intended	49.3	(332)	42.0	(50)	44.4	(8)	48.1	(390)
Unintended while using	19.6	(132)	20.2	(24)	16.7	(3)	19.6	(159)
Unintended while not using	31.1	(209)	37.8	(45)	38.9	(7)	32.2	(261)
Total	100.0	(673)	100.0	(119)	100.0	(18)	100.0	(810)

Actions taken as a consequence of Unintended Pregnancies

Clients who reported an unintended pregnancy were asked about the reasons why the pregnancy was not desired (if it was undesired in addition to being unintended), and if they did any thing to terminate the pregnancy, (Figure 18) Among the clients from the 1/90

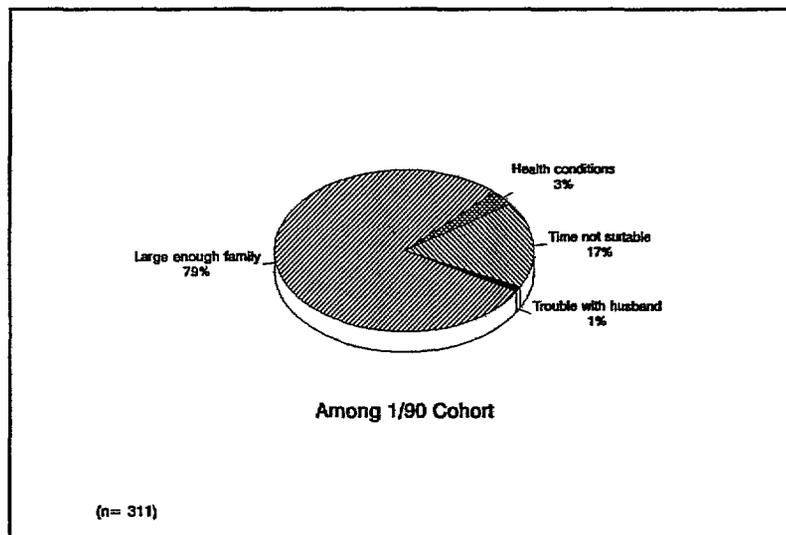


Figure 18 Reasons for not wanting the unintentional pregnancy among 1990 cohort

cohort, three quarters of these pregnancies were undesired because the woman thought her family was already large enough, and an additional 17% felt that the time was not right for them to become pregnant. These were the most common reasons regardless of the woman's contraceptive use status.

Regarding the action taken as a consequence of these unintended pregnancies, Figure 19 shows the results from both the 1/89 and 1/90 cohort together 1,081 pregnancies were experienced by CSI clients in the study during the past 5 years, out of which approximately 50% were reported

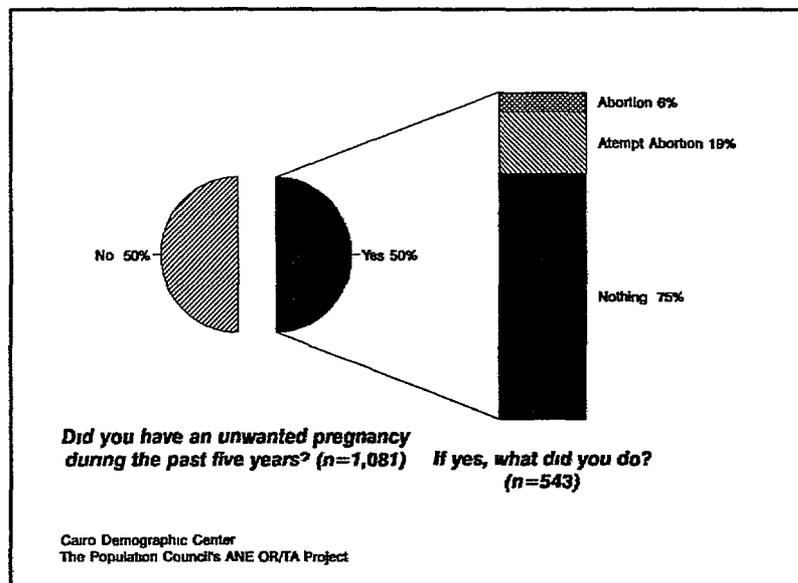


Figure 19 History of Unwanted Pregnancy among CSI Clients in Egypt

being unintentional / unwanted This group of clients was asked if they took any action as a consequence of the unwanted pregnancies The majority of these pregnancies prompted no action (75%) Approximately 19% of the pregnancies followed by an attempt to terminate it without success An additional 6% of the pregnancies were terminated with

Among the clients from 1/90 cohort, 50% of pregnancies were unintended and about 25% attempted to terminate their pregnancies

success Thus clients attempted to terminate, either with or without success 25% of the unintentional pregnancies recorded in this study

Cumulative Extended Use Failure Rates

A life table technique of analysis was applied to clients from the 1/90 cohort up to the first change in their contraceptive use status in order to examine the cumulative extended use failure rates for this group of clients This analysis will provide the results that show the proportion of clients who are expected to be at risk for an unintentional pregnancy The results focus on all methods, IUD, pill and condoms There were too few cases of injection users to permit this type of analysis Tables 21 and 22 present the results of the extended use failure rates for all of the unintended pregnancies, either during a period of contraceptive use or nonuse

Table 21
Life Table estimates of the cumulative extended use failure rates by place and duration of use, (all methods and IUD)

Duration (Months)	All Methods			IUD		
	Urban	Rural	Total	Urban	Rural	Total
6	3 09	3 14	3 12	1 71	0 32	1 26
12	5 10	5 13	5 12	2 44	0 81	2 00
18	6 30	6 52	6 44	3 62	1 30	3 03
24	7 38	7 49	7 45	4 72	1 64	3 92
30	7 57	8 69	8 30	6 33	1 64	4 94
36	8 55	9 73	9 30	7 18	2 17	5 80
42	8 75	9 95	9 51	7 35	2 35	6 02
48	8 95	10 06	9 65	7 53	2 53	6 24

Table 22
Life Table estimates of the cumulative extended use failure rates by place and duration of use, (Pill and Condom)

Duration (Months)	Pill			Condom		
	Urban	Rural	Total	Urban	Rural	Total
6	4 56	14 73	7 57	14 25	8 29	12 68
12	10 30	24 35	14 57	17 73	8 29	15 22
18	12 68	27 26	17 14	17 73	8 29	15 22
24	13 95	31 90	19 43	18 94	11 45	16 97
30	14 63	31 90	19 92	18 94	11 45	16 97
36	16 07	33 61	21 46	21 51	11 45	18 80
42	16 82	33 61	22 00	21 51	11 45	18 80
48	16 82	33 61	22 00	21 51	11 45	18 80

With respect to all methods (Table 21) about 5% of the clients are expected to have unintended pregnancy during the first year of use and this rate increases to about 7.5% during the first 2 years. About 90% of the clients are expected to be protected from pregnancy during the first four years of CSI family planning use. There are minor variations by urban and rural areas from the combined total.

The analysis of IUD users shows that 98% of this group can be protected during the first year, about 96% during the first 2 years and 94% during the first 4 years. The detailed analysis (not shown in the table) reflected small standard error and narrow range between upper and lower limits for the estimated extended use failure rate. For instance, for the duration 48 months, standard error is 7.55 and

upper and lower limits are 7.75 and 4.73, respectively. There is substantial difference between urban and rural extended use failure rates for the IUD. The probability to fail among urban contraceptive users is considerably higher than rural users. By the end of 4 years, 7.5% of the urban women experienced a failure compared to 2.5% of the rural sample.

Pill users experience a greater likelihood of extended use failure. Approximately 15% of the pill users will have a failure during the first year, 19% during the first 2 years and 22% during the first 4 years of oral contraceptive use. The difference between urban and rural areas is considerably large. This difference (with rural having an increased likelihood of contraceptive failure for pills) begins by about 14 percentage points at the close of the first year and increases to almost double the chance by the close of the fourth year.

Condom users as well as pill users experience a greater likelihood of extended use failure rates.

7 Contraceptive Continuation Rates

This section of the report presents the results on how long a CSI client continued to use a contraceptive method. It examines the reasons clients give for continuing to use and for stopping use of contraceptives. The mean duration use is a particularly important finding as it is the basis for calculating the conversion coefficients for 'couple - years protection' (CYP) for the CSI project. The continuation rates presented in this section are based on an analysis of clients from the 1/90 cohort, up to their first change in contraceptive use status (i.e., 48 month period ending in 12/93).

Table 23
Cumulative Continuation Rates by Method Used

Months since admission	IUD	Pill	Condom
6	77.9	81.1	64.2
12	73.6	71.9	54.2
18	67.3	59.6	36.6
24	66.0	49.9	31.2
30	64.3	45.0	23.0
36	64.0	42.9	23.0
42	63.6	39.2	23.0
48	63.3	35.3	18.8

Cumulative Continuation Rates

Figure 20 shows that approximately 70% of users of all contraceptive methods continue use up to the end of the first year, 59% continue to use until the end of the second year, and slightly over one-half (55%) continued up to the end of the fourth year.

There are minor variations between urban and rural

rates, with clients in rural areas being slightly more likely to continue use for the full 4 years than urban clients. Approximately 74% of IUD users continue to the end of the first year, two-thirds (66%) continue to the end of the second year when continuation rates level off, with 63% of the IUD users continuing use up to the end of the fourth year. As with the continuation rates for all methods, there are just minor differences in the rates by place of residence, with rural clients having a slightly higher continuation rate than urban clients (Table 23 & Figure 20).

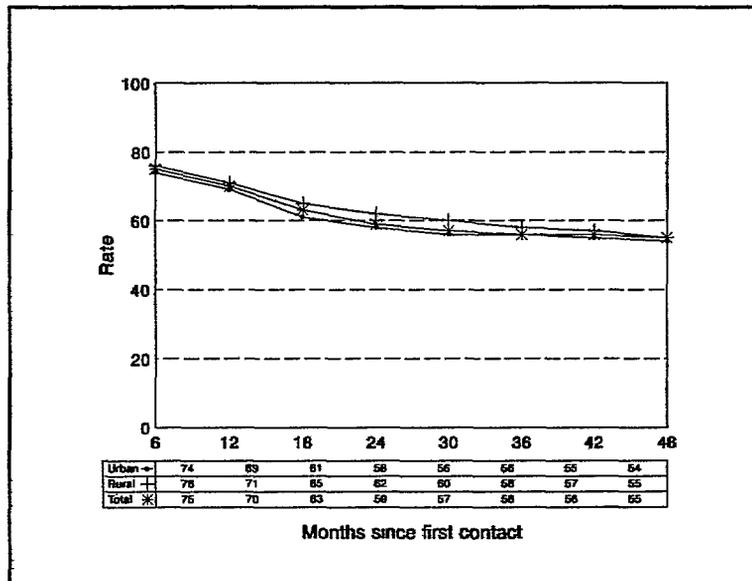


Figure 20 Cumulative Continuation Rates for all Methods

Clients who are using an oral contraceptive method have significantly higher continuation rates during the first six months than IUD users (81%), yet after begin a steady pattern of discontinuation so that by one year 72% are still using a pill (compared to 74% of IUD users), by the second year approximately half are still using (50%)

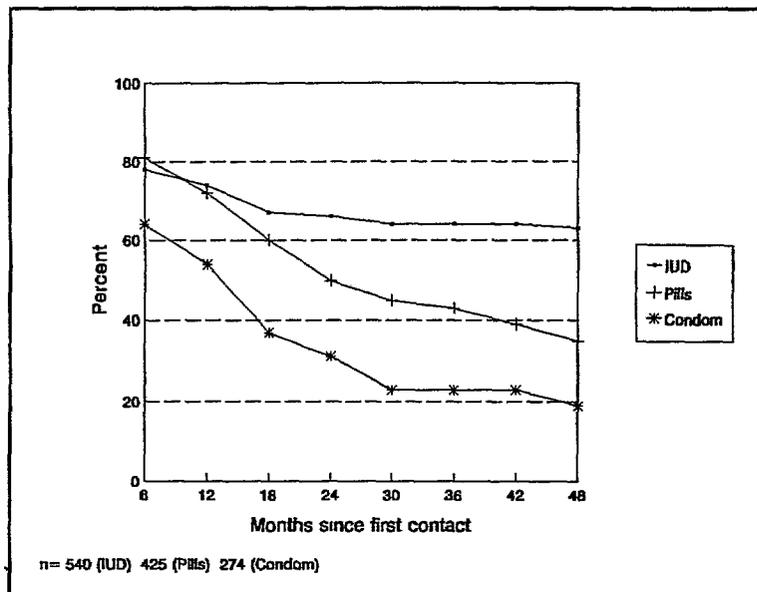


Figure 21 Cumulative Continuation Rates for IUD, Pill & Condom

and at the end of the fourth year only about one third (35%) are still using an oral contraceptive. The continuation rates for pill users in rural areas are generally lower than urban rates. At the end of the fourth year only 19% of the rural clients are still using a pill compared to 42% of the urban clients. The condom has the lowest continuation rates of the three methods. After 6 months of use only about two thirds (64%) of the condom users are still using the method, after the second year this drops to one-third (32%), and at the close of the fourth year only 19% of the condom users are continuing use.

Reasons for Continuation and Stopping Use of a Contraceptive Method

The reasons clients give for continuing to use a contraceptive method are generally because they find the method "long acting" (42%) or "suitable" (13%), (Figure 22) Table 24 shows that there are important differences in the frequency with which certain reasons are given depending upon the type of method a client is using

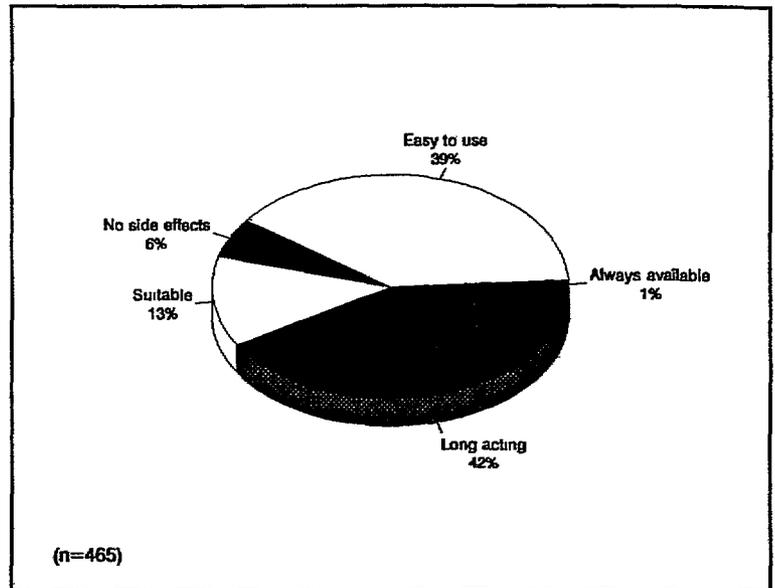


Figure 22 Reasons for Continuing to use a contraceptive method, 1990 Cohort

Table 24
Reasons for Continuing to use a Contraceptive Method

Reason	Method								Total No %	
	IUD		Injection		Pill		Condom/ etc			
	No	%	No.	%	No	%	No	%		
Long acting	193	47.3	1	7.0	1	3.1	0	0.0	195	42.0
Suitable	43	10.5	4	27.0	10	31.3	2	20.0	59	12.7
Easy to use	149	36.6	8	53.0	18	56.2	8	80.0	183	39.3
No side effects	23	5.0	2	13.0	2	6.3	0	0.0	27	5.8
Always available	0	0.0	0	0.0	1	3.1	0	0.0	1	0.2
Total	408	100.0	15	100.0	32	100.0	10	100.0	465	100.0

A client who is using a pill, injection or condom mostly cites the "ease of use" (56%, 53% and 80% respectively), whereas an IUD user cites "long acting" (47%). Regarding the reasons why clients stop using a contraceptive method, Figure 23 shows that generally "side effects" are the most common reason (46%), followed by "others", such as absence of husband or health reasons (25%), or a desire to become pregnant (20%)

Table 25 shows the reasons for stopping use by method. These findings show that side effects are the most common reason given by users of all methods except condoms, who cite "other" (e.g., husband absent, health reasons). Substantial numbers of IUD and pill users also cite a desire to become pregnant.

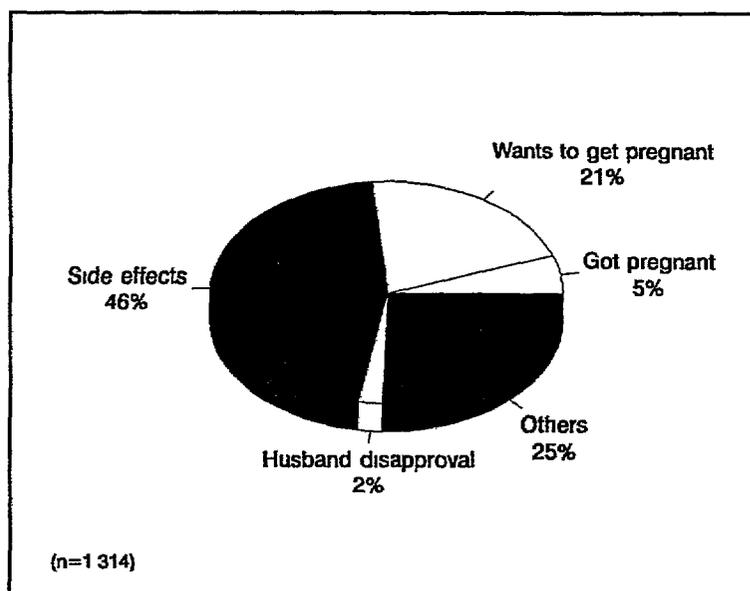


Figure 23 Reasons for stopping use of a contraceptive method, 1990 cohort

Table 25
Reasons for stopping use of a contraceptive method

Reason	Method								Total	
	IUD		Injection		Pill		Condom/etc		No	%
	No	%	No	%	No	%	No	%		
Got pregnant	32	4.6	3	1.4	18	7.0	18	12.7	71	4.5
Wants to get pregnant	179	25.6	9	4.2	66	25.6	11	7.7	265	20.2
Side effect	358	51.2	126	58.6	110	42.6	19	13.4	613	46.6
Husband disapproval	3	0.4	0	0.0	1	0.4	23	16.2	27	2.1
Others*	127	18.2	77	35.8	63	24.4	71	50.0	338	25.7
Total	699	100.0	215	100.0	258	100.0	142	100.0	1314	100.0

* Include absence of husband and health conditions

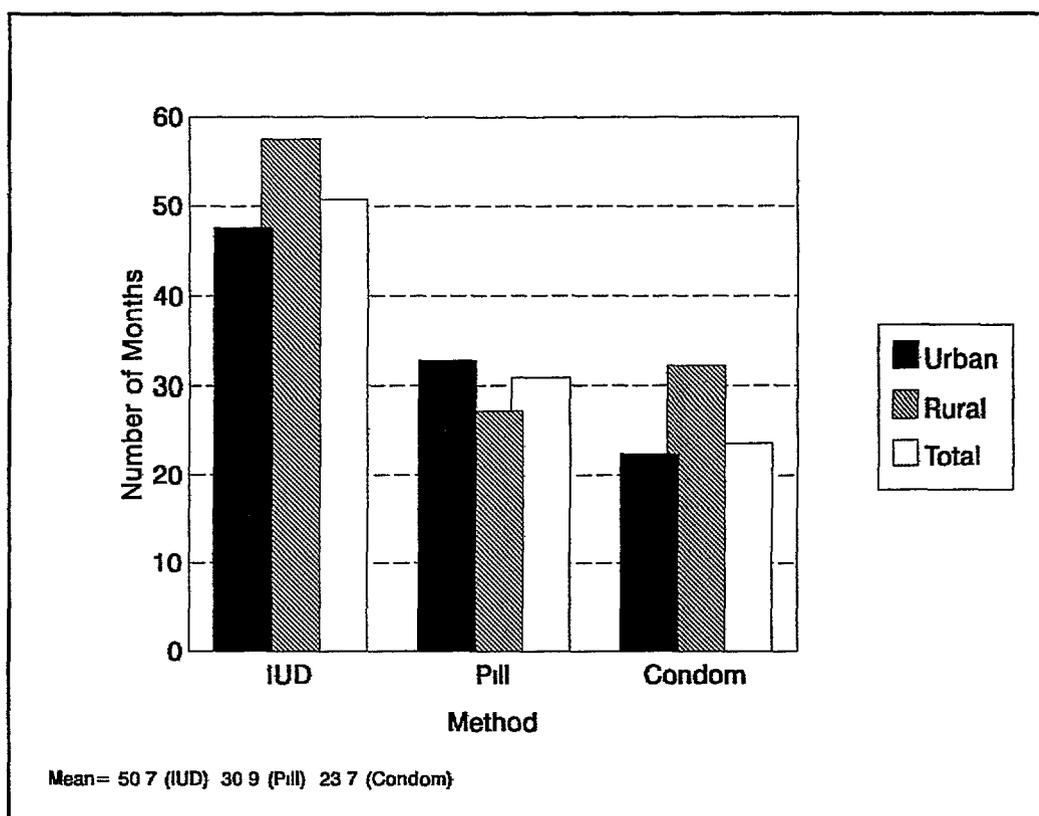


Figure 24 Mean Duration of use by method & residence

Mean Duration of Use

The results of the life table analysis shows the cumulative proportion of users who continue to use the same contraceptive method up to the end of the study period. The mean duration of use is an important measure used in the estimation of the conversion factors for CYPs. A decay function was fitted for each method (by urban, rural and total groups). The results are shown in Figure 24.

These results show that an IUD user will on the average keep using the IUD for 50.7 months (4.2 years), a pill users will keep using pills on an average for 31 months (2.6 years) and condom users will keep using condoms on an average for 24 months (2 years). Thus, this analysis indicates that a CYP co-efficient for the IUD could be as high as 4.2 in case of CSI program. This estimate is higher than the national estimate currently used in Egypt (2.5).

8 Quality of Services

Accessibility and Availability

Health care services should have easy access (i.e., entry to the facilities should not have insurmountable barriers such as long distances, high cost or requirements such as spousal approval), and they should be available (i.e., waiting time should not be prohibitively long, the hours of service should be reasonable and regular, etc.) Table 26 presents results from indicators of access and service availability that were measured in this study

Table 26
Selected indicators of Access and service Availability
by location and type of clinic

Indicator	Lower Egypt		Upper Egypt		Total
	Primary	Satellite	Primary	Satellite	
Average time taken from client's home to the clinic (in minutes)	32	20	33	26	29
% of clients reported that going to the clinic on foot	30	64	36	58	42
% of clients that travel < 30 minutes to clinic	80	98	77	85	82
% of clients who report < 30 minutes waiting time	57	75	34	34	48
Cost of Service is reasonable (%)	84	84	82	79	82

CSI clients have easy access to the clinics almost one-half of the clients (42%) live so close to a CSI clinic that they walk to it. The majority of clients (83%) stated that it takes them less than 30 minutes to travel from their home to a CSI clinic. An equally large percentage of the clients (82%) reported that the cost of CSI services are reasonable and not too high (indicating no financial barrier for clients who obtained CSI services)

Client Provider Interactions

The study collected information on a few indicators relating to the readiness of CSI services to provide high quality client - provider communications. These results are presented in Figure 25. CSI clinics almost universally have facilities that guarantee the auditory and visual privacy of the family planning

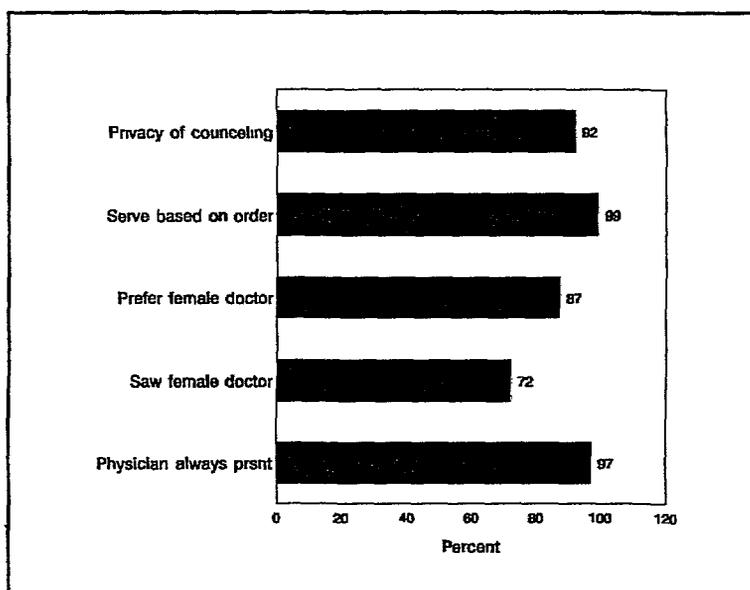


Figure 25 Selected Indicators of Client Provider Interactions

consultation. A physician was reported as almost always being present during the consultation, and for three quarters of the clients in this study (72%) that physician was a woman. The importance that CSI clients place on having a female provider is shown by the finding that approximately 87% report that they prefer to be seen by a female physician.

Information Given to Clients and Method Choice

Almost all of the CSI clients interviewed reported that there was sufficient information provided during the family planning consultation about the contraceptive methods, (Figure 26)

Very few of the CSI clients reported any difficulties in obtaining their contraceptives at the CSI clinics (97% reported that methods are always available) The role of clients in choosing the contraceptive method that they use is not always ensured, however Just over one half of the CSI clients interviewed in this study (58%) reported that they chose their first contraceptive method themselves

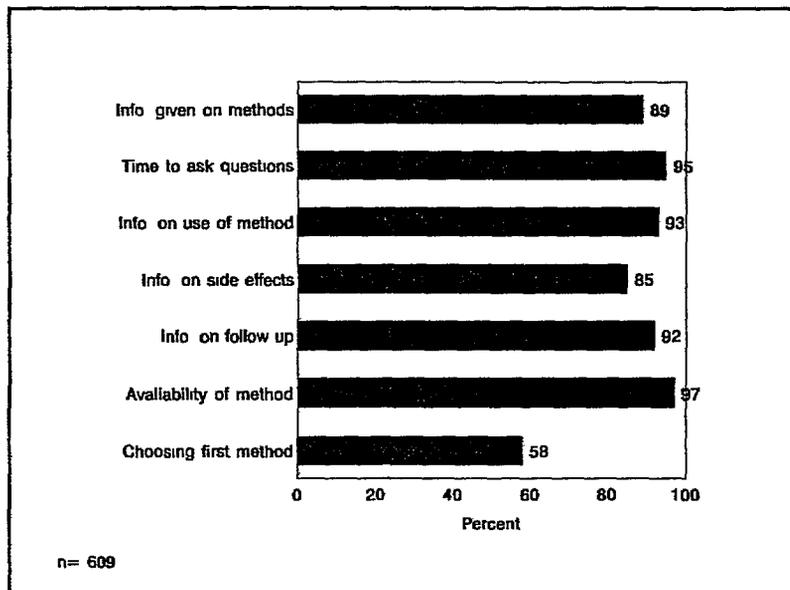


Figure 26 Percentage of clients reporting on selected indicators of information exchange & method choice

Difficulties in Conducting Outreach Services

The CSI staff who are responsible for conducting the outreach services were asked to cite the principal difficulties they encounter in doing their work The results presented in Figure 27, show that the two principal reasons are that there is a shortage of transportation (48%) coupled with inaccurate or incomplete client locator information (48%)

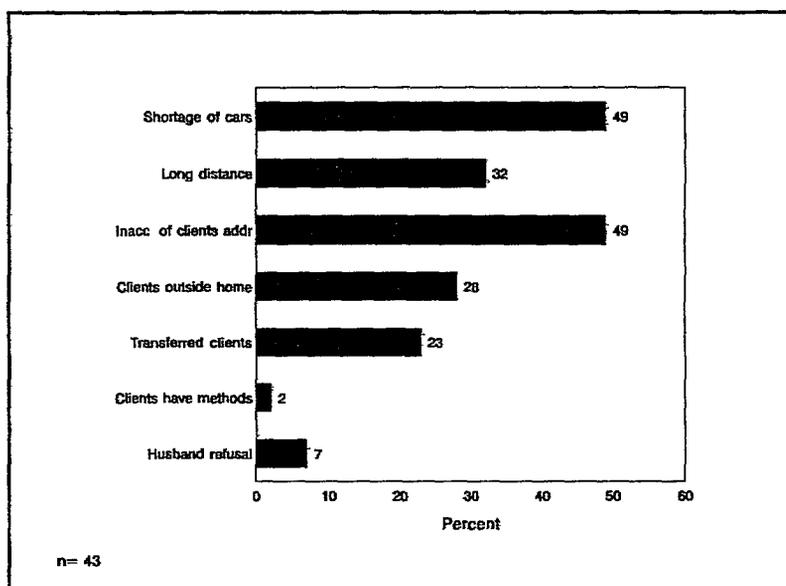


Figure 27 Percent of Social Workers reporting the difficulties facing them in following up Clients drop out

VII. Discussion & Program Implications

This study was conducted to provide information needed to evaluate the extent to which CSI project has achieved its objectives and to provide guidelines for staffing pattern, training and service provision. The information required for this study included data on the continuity of service use, reasons for staying with CSI service or shifting to other sources, method use continuation and switching to other methods. Results on IUD continuation rates were used to examine the CYP co-efficient currently in use by CSI Program. CSI managers also sought information on the incidence of unintended pregnancies among their clients and effectiveness of CSI follow up mechanism and the outreach teams performance.

The study produced an elaborate and comprehensive analysis that suggests several important project modifications. Many key points that emerged from the analysis need to be highlighted.

The CSI was initiated to upgrade the quality and quantity of family planning services. It aims at promoting continuity of method use among its clients regardless of type of service utilized. To that end, CSI has been successful. 71% of women who enrolled in CSI were using any contraceptive method after 5 years since admission. However not all of those users continued to be CSI clients. Only about 17% of women who enrolled in CSI project were still using CSI services after five years since admission. About one third shifted to other sources and more than one fifth continued using a long acting method chosen at CSI clinics without visiting any type of service providers.

This study shows that a major reason for dropping out from the CSI program is the relative inaccessibility of CSI clinics compared to other family planning sources. Approximately, 70% of the CSI clients who stopped using CSI services reported inaccessibility of CSI clinics (the majority of these cases are most likely seeking resupply of their methods). Other recent studies have confirmed this finding² and interpretation of the results. Although this type of shifting is rational consumer behavior, the CSI program should take into account issues of accessibility and market segmentation as it considers the development of new

² SPAAC 1994. A Study Profile of Clients of Different Family Planning Providers

service delivery sites

Another reason for ceasing use of the CSI program is the relatively high cost of services (reported by 12% of women). This reason was also indicated by the other study referred to (SPAAC study). The present study showed that CSI clients are on the average better educated and more likely to be working than other women. SPAAC study affirmed that CSI clients are better off and enjoy better living conditions than other women. If women enrolled in CSI are the targeted ones (medium level), why some of them have problems with the cost of services charged by CSI clinics? A better answer should be sought through careful study of market factors. This finding should also be born in mind when issues related to sustainability/ cost recovery are considered.

CSI clients who shifted service, most likely went to pharmacies (45%) and private doctors (25%). The primary single reason for shifting to pharmacies is the easy access to them, a reason reported by 96% of women who turned to this source. The primary reasons for shifting to private doctors were better quality of services and higher qualities of service providers (32% & 33%). These findings should receive special attention from CSI program. Although it is assumed that CSI was designed to provide high quality services to middle class women who can't afford private physician service, it is worthy to examine whether there are gaps in quality planned by CSI versus quality received, and reasons why some CSI clinics have more satisfied clients than others.

This study reflected the weakness of CSI follow up mechanism. Only 12% of women who dropped out were contacted by the outreach team. Moreover, close to 50% of these contacts took place six months or more after drop out. The office study could not even locate some CSI clients using record based information, as files were only available for 98% of the desired sample size. The study also faced difficulties in tracking women falling in the study sample. A large part of non-response cases (more than half) was due to problems in reaching women at their addresses that were incomplete, false, or they never lived there. Additionally, social workers reported problems that affected possibility of home visits to women who dropped out. CSI need to give more attention to getting complete, accurate addresses of its clients and resolving problems of social workers to facilitate follow

up activities

As the staffing pattern of CSI has been recently changed, which resulted in using smaller number of outreach team members, the role of whom was shifted towards becoming multi-purpose workers, (including administrative tasks in addition to outreach duties), less effort will be made to track clients who drop out. Consequently, less information will be available about why women stop using CSI services and reasons of their dissatisfaction and/or their problems.

CSI clients continued to either use the same method, switch to another method(s) or stopped use depending upon their comfort with the method, experience with side effects, or their desire to get pregnant (including those who unintentionally became pregnant). This study revealed that women continued to use a method for two major reasons: it was long acting (reported by 42%) and easy to use (39%). On the other hand, among those who discontinued using a method, the primary reason was experiencing side effects, a reason mentioned by close to half of women of this group. The study indicated that the IUD is the method of choice of most of CSI clients. After four years of first use since admission, about 63% of IUD users were still using the method, compared with only 35% of pill users and 19% of condom users. These differences were reflected in the mean duration of use of IUD: about 51 months versus 31 and 24 months for pill and condom, respectively. This information could be utilized to estimate CYP co-efficient for pill and condom. For the IUD, mean duration of use is equivalent to CYP co-efficient. Thus, the CYP coefficient for the IUD inserted at CSI program is 4.2, which is higher than the national average currently used (2.5). This important and new information should now be used and conveyed to program managers.

Four years after initial contact with CSI clinic, about two-thirds of women of 1990 cohort who were still using a method were using same method they started with. The remaining one third changed method. The IUD was nearly not affected and the pills gained about 63% of its initial users. The study indicated that there was remarkable switch from injection to other methods, primarily the IUD followed by the pills. Switching to injection was infrequent. Only 56 clients in the study are currently using injection versus 157 who chose it as their first method at admission. CSI should examine the underlying reasons for this striking change in

order to remove any barriers to widening contraceptive choice for CSI clients
Possible reasons could be related to lack of regular supplies, inadequate counseling or provider attitudes

The study findings indicated that 50% of women with pregnancies since admission experienced unintended pregnancies, and among them, about one fourth attempted an abortion. Four years after admission, CSI was unable to protect 10% of all clients from the risk of unintended conception during periods of use or non use. This risk elevated to 22% and 19% among pills and condom users. Some women experienced unintended pregnancies more than once (20% of unintended pregnancies are of second order or more). Thus, CSI needs to influence its clients to return to CSI centers for regular follow-up visits. CSI should react effectively to women's complaint from side effects and help them switch to other methods without periods of rest or non use.

In addition to importance of revisits to manage cases of side effects to avoid exposure to unintended pregnancies, revisits are also important to discover any health problems even if women do not experience any side effects. As the IUD is the method of choice for the majority of CSI clients as indicated by this study, follow up visits must be regular, as IUD users are more at risk for reproductive track infections, if exposed to risk factors, as a recent study indicated³

Finally, the study has reflected differences in performance of CSI clinics. Satellites (versus primary) and Upper Egypt (versus Lower Egypt) centers did better in many situations. Examples are better completion rates of counseling forms (examined by the office study), higher response rates of the study's sample (reflecting in part various mechanisms to better locate women), higher percentage of clients still visiting CSI centers and more regular visits at schedule. It is important for CSI to pursue examining this issue. It may find it necessary to refine management mechanism in some sites, or to adapt some instructions and procedures to better respond to local needs.

³ Zurayk *et al.* 1994 Rethinking Family Planning Policy in Light of Reproductive Health Research. The Population Council, Cairo

VIII. Recommendations

- In providing counseling to CSI clients, it should be made clear that if the chosen method is not satisfactory (not convenient, cause side effects, etc), it is always possible to return to the center to be assisted to change method Counseling should also address the risk involved in temporary discontinuing the method with no intention to get pregnant CSI should be more effective in protecting its clients from unintended pregnancies
- The CYP co-efficient for IUD use in CSI services was indicated as being lower than the actual mean duration of use Consideration of this issue should be given by the appropriate authorities
- CSI should reinforce and strengthen systematic follow up mechanism It needs to reconsider having efficient outreach teams allocating most of its time to out of clinic activities
- CSI should undertake periodic assessment of quality received by clients to identify existing gaps that need improvement This assessment should be made in different types and locations of CSI centers
- CSI should identify reasons underlying the striking switch from injection to other methods and should react accordingly Gaps in counseling, regular supplies of injection or provider attitude should be discovered
- CSI needs to consider relocating some of its clinics so as to be more accessible As a considerable proportion of CSI clients come from rural areas, CSI may consider locating some clinics in big villages
- CSI should research reasons why some centers are doing better than others This should be done through careful assessment of CSI centers' performance
- More attention should be given to CSI "housekeeping" Clear and complete address for women should be recorded at admission Clients' files and counseling forms need to be more complete
- Various problems facing social workers in making home visits should be carefully addressed