

**Women's Use of Public and Private Family Planning Providers:
An Examination in Egypt**

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Abstract

Understanding choice of family planning provider is fundamental for policy makers and program managers as they seek ways to both improve the coverage and increase the sustainability and efficiency of family planning services for Egypt to achieve its population objectives. This study focuses first on providing a descriptive profile of the patterns of reliance on sources of family planning services. Binomial logit models is then estimated to obtain a more in depth understanding of the determinants of the choice of family planning providers in Egypt using the 2000 Egypt Demographic and Health Survey. The study offers insights into a number of aspects of family planning service provision about which there has been less previous investigation. There are marked differences in the extent to which Egyptian women rely on public or private providers for family planning services depending on the type of method they are seeking. Among the more important findings is the consistency women display in the choice of provider among women reporting multiple segments of use. With regard to the determinants of the choice of provider for family planning services, perhaps the most interesting finding is that household wealth was not a significant determinant of the choice of provider. This may reflect that private sources meet the demand for family planning services of significant proportions of women in rural areas and among those in the low income groups.

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Introduction

There is growing appreciation that women who obtain contraceptive services often have other reproductive health care needs, and that women obtaining other reproductive health care may have unmet contraceptive needs and that the needs of both of these groups of women can often be met best by providers who are able to offer a range of services. An inadequate supply of reproductive health preventive and curative services are thought to be an important factor contributing to women's poor health status and high maternal mortality rates in developing countries.

Ideally, the availability of reproductive health services should not be a constraint to accessing reproductive health care. Beyond basic availability, other issues relating to supply become important including the factors that affect provider choice in cases where multiple outlets offering the same or similar services co-exist. In looking at provider choice, a common dichotomy is between public and private providers. Where public and private sector outlets offer the same services, they generally differ in terms of price, convenience, etc., leading the user to select an outlet on the basis of income, opportunity costs and personal preferences. In some instances, the public sector may distort the market by extending subsidies to clients willing and able to pay higher prices for goods and services. Usually research about providers mainly focuses on the supply side such as training of providers¹, knowledge and practices², nature of visit³, provider characteristics⁴, the 'culture' of service delivery⁵, communication with clients⁶, and integration of services⁷. On the other side, the demand in many instances is overlooked.⁸

In Egypt, contraceptive and other reproductive health care services are offered by almost 5,000 public health care unit, and more than 20,000 private-practice obstetrician-gynecologists, and other sources (such as private clinics, hospital, mosques/churches, NGOs, etc.). Despite of this medical network, which is almost equivalent to that in some developed countries, Egypt contraceptive prevalence rate has reached only 56 percent in 2000 with 54 percent depending on modern methods and a total fertility rate of 3.5 live births/woman. ⁹ Unmet need for contraception reaches 11 percent while discontinuation rate is as high as 30 percent within 12 months of starting use. Egypt's current population policy is to reach fertility replacement level by the year 2017. This requires increasing prevalence, to almost 75 percent, decrease discontinuation rate and unmet need, plus other reforms on other dimensions -such as the improvement of female education status- which are beyond the scope of this study.

This article attempts to obtain more detailed insight into the factors that influence the choice of provider for family planning in Egypt. An understanding of the patterns of provider choice and their determinants will be of use to policy makers and program managers as they seek ways in which to both improve the coverage and increase the sustainability and efficiency of family planning services for Egypt to achieve its population objectives. While the need for such investigation has been recognized, research relating to the choice of family planning provider in Egypt is limited. Literature addressing aspects of the issue within the Egyptian context includes few efforts.¹⁰

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This article has two purposes: to describe current patterns of reliance on public and private providers among family planning users; and to identify the determinants of the choice of public and private providers.

Data

The data on the sources from which women obtained family planning services used in this article is drawn from information collected in the most recent Egypt Demographic and Health Survey (EDHS) conducted in the year 2000. In the 2000 EDHS, family planning source information was collected for all episodes of contraceptive use during the five-year period before the survey. With regard to the current segment of use, information was obtained from all users on the source from which the method was obtained at the beginning of the current segment of use and, for users of methods requiring periodic resupply (pills, injectables, condoms and vaginal methods), on the source to which user had gone most recently to obtain the method. For episodes other than the current segment, the source is the outlet at which the method was obtained at the beginning of the segment. For purposes of the analysis that follows, the family planning source is generally grouped by sector (public or private). In looking at the sources for methods requiring resupply (e.g., the pill), the source is also looked at from the point of view of the type of provider (clinical and pharmacy/nonclinical).

Source at Beginning of Current Segment of Use

IUD is the most common method in Egypt since it is being used by almost 66 percent of current users. Pill is the second method (almost 18 percent). Table 1 shows the distribution of current users of modern methods by type of source from which the method

was obtained at the beginning of the current segment of use. Overall, at the time they began using their method, one in every two of these users went to a public sector source for the method, one-third obtained the method from a private clinic (including private hospital/clinic/doctors, NGO/PVO clinics, and mosque/church clinics), and 11 percent went to pharmacies. The source from which users obtained services at the beginning of the current segment varies markedly by method. Table 1 shows that the majority of IUD insertions occurred at a public sector source (54 percent) while 40 percent of the insertions were performed at private clinics. Four out of five users obtained the injectable at a public sector source at the beginning of the current segment of use, and almost all Norplant insertions took place at public facilities. The comparatively few respondents who reported use of female sterilization were evenly split between those obtaining the method at a public sector provider and those relying on a private provider.

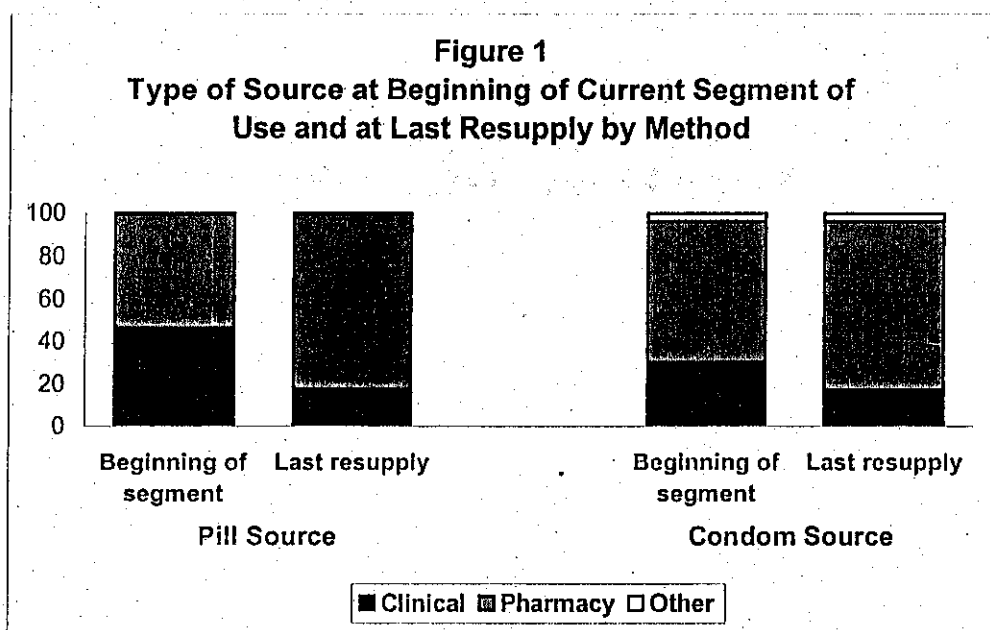
Type of source	Pill	Condom	IUD	Inject-ables	Nor-plant	Female sterili-zation	Vaginal methods	All modern methods
Public	18.3	16.9	54.0	80.0	95.2	46.5	13.0	49.8
NGO/PVO	0.7	1.7	6.9	2.8	0.0	1.5	0.0	5.1
Private clinical*	27.6	11.8	39.1	14.7	4.8	51.9	40.5	34.1
Pharmacy	53.1	65.9	0.0	2.0	0.0	0.0	46.5	10.9
Other**	0.3	3.7	0.0	0.6	0.0	0.0	0.0	0.2
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of users	1,362	140	5,112	876	32	217	23	7,760

NGO=non-governmental organization
PVO=private voluntary organization
* Includes private hospital/clinic/doctor and mosques/church clinic
** Includes friends/relatives and other

At the beginning of the current segment, pill, condom and vaginal method users were more likely to report getting the method at a pharmacy (53 percent, 66 percent, and 46 percent respectively) than from either public or private clinical provider. Figure 1

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compares the source at the beginning of the current segment with the source where the last supply of the method was obtained for current users of the pill and condoms. The results indicate that, as expected, many of the users who obtain these methods from a clinical provider switch to a pharmacy for resupply.



Differentials in Family Planning Sources by Background Characteristics

Tables 2 and 3 present the distributions of current users by the type of source at the beginning of the segment according to selected demographic and socio-economic characteristics for the IUD and pill users—the two most popular methods in Egypt. The tables offer insights into how patterns of reliance on public and private sector providers vary among users of these methods. In the case of pill users, the results also permit an exploration of the question of how users who consulted a clinical provider when they began using the method differ from users who got the method from a pharmacy without consulting a clinical provider. For IUD users, the tendency to go to public sector sources

Table 2: Percent distribution of users of the IUD by the type of source at the beginning of the segment according to selected background characteristics, Egypt DHS 2000.

Characteristics	Source of method at the beginning of segment			Total	Number of users
	Public	NGO/PVO	Private clinical		
Age					
15-24	59.4	6.4	34.2	100.0	738
25-39	54.2	7.2	38.6	100.0	3222
40-49	49.8	6.5	43.6	100.0	1152
Type of place of residence					
Urban	48.7	6.6	44.7	100.0	2593
Rural	59.4	7.2	33.3	100.0	2518
Region					
Urban Governorates	48.8	4.3	46.9	100.0	1218
Lower Egypt	54.9	8.0	37.1	100.0	2584
Urban	47.5	10.4	42.0	100.0	755
Rural	58.0	7.0	35.0	100.0	1829
Upper Egypt	57.3	7.2	35.6	100.0	1271
Urban	50.1	6.4	43.4	100.0	593
Rural	63.5	7.8	28.7	100.0	678
Frontier Governorates	44.9	12.1	43.0	100.0	38
Education					
No Education	62.6	6.1	31.4	100.0	1795
Primary incomplete	61.8	6.8	31.4	100.0	629
Primary complete, some secondary	57.5	6.3	36.3	100.0	678
Secondary Complete, higher	42.7	8.0	49.4	100.0	2009
Wealth Index Quintiles					
1	67.0	4.7	28.3	100.0	655
2	64.8	6.8	28.5	100.0	804
3	60.8	6.7	32.5	100.0	811
4	58.2	7.3	34.5	100.0	983
5	39.5	7.7	52.8	100.0	1858
Working for cash					
Currently working for cash	46.6	9.6	43.8	100.0	917
Not working for cash	55.6	6.4	38.1	100.0	4195
Partner's Occupation					
Professional/ Technical / Managerial	41.2	7.8	51.0	100.0	1500
Other/ Not working	59.2	6.6	34.2	100.0	3612
Number of living children					
0-3	51.9	7.4	40.7	100.0	3280
4+	57.6	6.2	36.1	100.0	1832
Desire for more					
Wants no more	53.1	6.7	40.1	100.0	3984
Wants more/ Unsure	56.8	7.6	35.5	100.0	1128
Total	54.0	6.9	39.1	100.0	5112

decreases and reliance on private clinics increases somewhat in importance as the respondent gets older. For instance, 59 percent of IUD users 15-24 obtained the method

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from public sources compared to around 50 percent of those 40-49 years. In the case of the pill, in contrast, age is not strongly related to whether a user went to a clinical source or the pharmacy at the beginning of a segment of use. In addition, among pill users who obtained the method from a clinical source, age differentials in the likelihood of going to a public or private outlet are not marked.

Urban-rural residence and place of residence are clearly related to the type of source from which an Egyptian women seeks contraceptive services. Rural users are more likely to get the IUD from a public source than urban women. For example, 59 percent of current IUD users in rural areas got the method from a public source compared to 49 percent of urban IUD users (Table 2). Rural users were somewhat more likely than urban users to get the pill from pharmacies without consulting a clinical source. Moreover, urban users who got the pill from a clinical source were much more likely to obtain it at private than at public outlets while rural pill users were more evenly divided between using public and private clinics (Table 3).

Looking at the differentials by place of residence, reliance on public sources for the IUD is most common in rural Upper Egypt, followed by rural Lower Egypt. Interestingly, there is greater somewhat variability in the level of reliance of IUD users on NGO/PVO providers by place of residence than exists for other characteristics. Pill users were least likely to get the method from a pharmacy at the beginning of the segment of use in urban Upper Egypt (46 percent) and most likely to get it there in rural Lower Egypt (57 percent). Among urban pill users who did seek services from a clinical provider, private outlets were markedly more popular than public outlets, whether the user lived in the

Urban Governorates, urban Lower Egypt, or urban Upper Egypt. In contrast, among rural pill users who obtained the method from a clinical provider, the division between private and public outlets is more balanced:

Characteristics	Source of method at the beginning of segment					Total	Number of users
	Public	NGO/PVO	Private clinical	Pharmacy	Other		
Age							
15-24	19.3	0.2	30.0	50.3	0.2	100.0	171
25-39	18.6	0.6	26.7	53.6	0.5	100.0	855
40-49	16.9	1.2	28.6	53.2	0.0	100.0	336
Type of place of residence							
Urban	14.5	0.8	33.8	50.6	0.4	100.0	654
Rural	21.7	0.7	21.9	55.5	0.2	100.0	707
Region							
Urban Governorates	15.2	0.8	33.4	49.5	1.1	100.0	223
Lower Egypt	19.3	0.4	24.0	56.4	0.0	100.0	645
Urban	13.1	0.6	31.1	55.1	0.0	100.0	227
Rural	22.6	0.3	20.1	57.1	0.0	100.0	419
Upper Egypt	18.0	1.0	30.5	50.2	0.4	100.0	469
Urban	15.0	0.6	38.6	45.8	0.0	100.0	188
Rural	20.0	1.3	25.0	53.1	0.6	100.0	281
Frontier Governorates	24.9	2.9	16.0	56.2	0.0	100.0	25
Education							
No Education	18.4	0.4	21.8	58.7	0.7	100.0	543
Primary Incomplete	19.6	0.5	24.8	55.2	0.0	100.0	191
Primary complete, some secondary	16.9	2.1	32.5	48.5	0.0	100.0	222
Secondary Complete, higher	18.1	0.5	34.0	47.2	0.1	100.0	406
Wealth Index Quintiles							
1	26.5	0.0	12.6	60.6	0.3	100.0	177
2	19.1	0.2	16.3	64.0	0.4	100.0	192
3	21.7	1.3	24.1	52.3	0.6	100.0	278
4	19.1	0.8	28.5	51.3	0.4	100.0	301
5	11.4	0.8	41.0	46.7	0.1	100.0	414
Working for cash							
Currently working for cash	18.3	1.6	28.0	52.1	0.0	100.0	189
Not working for cash	18.3	0.6	27.5	53.3	0.4	100.0	1173
Partner's Occupation							
Professional/ Technical / Managerial	16.9	1.0	37.4	44.8	0.0	100.0	328
Other/ Not working	18.7	0.6	24.5	55.8	0.4	100.0	1034
Number of living children							
0-3	17.4	0.5	30.8	50.8	0.3	100.0	728
4+	19.2	0.9	23.9	55.7	0.3	100.0	634
Desire for more							
Wants no more	17.6	0.9	27.1	54.1	0.3	100.0	1088
Wants more/ Unsure	20.7	0.1	29.6	49.1	0.5	100.0	274
Total	18.3	0.7	27.6	53.1	0.3	100.0	1362

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A respondent's education and work status, her husband's occupation and the household's position on the wealth index tend to markedly affect the choice of the source among IUD users. Users of these methods who are more educated, working for cash, married to men in professional, technical or managerial occupations, and/or living in a household at the top of the wealth index are less inclined to obtain the method from public sources and more inclined to rely on private clinics than other users.

Among pill users, these characteristics also are associated with the type of source, particularly with the likelihood of consulting at a clinic rather than getting the method from a pharmacy. For example, among users at the bottom of the wealth index, 61 percent got the method from pharmacies at the beginning of the current segment of use. In contrast, among users from households at the other end of the household wealth scale, around 41 percent consulted a clinical provider at the beginning of the segment.

Regarding injectables which is the third most common family planning method in Egypt (11 percent), the reliance on public providers is very clear regardless of background characteristics of users. However, reliance on private providers increases with age, education, and wealth of users, and among urban residents (table not shown).

Finally, despite the close association between the user's socio-economic level and the likelihood of reliance on a private clinical provider for contraceptive services, the findings also indicate that many users belonging to relatively wealthy households obtain services from public providers. For example, 40 percent of the current IUD users living

in households ranked at the top of the household wealth index obtained the method from a public provider.

Consistency in Choice of Sources

The 2000 EDHS collected information on the source from which a user obtained the method for all segments of use of family planning methods during the five-year period before the survey. These data can be used to answer questions about whether family planning users tend to remain 'loyal' to a particular type of source in accessing services or whether they 'switch' public and private sources for services. Since injectables are for the most part only obtained from public sources, the analysis of patterns of consistency is limited to IUD and pill users who reported two or segments of use of the method during the five-year period before the survey.

Regarding consistency of type of provider among IUD users, Table 4 shows the percent distribution of women reporting multiple segments of IUD use during the five-year period prior to the survey by type of source from which method was obtained during the segments of use according to the number of segments of use. The results clearly suggest there is a high degree of consistency in the type of provider. Four in five of the women who reported multiple segments of IUD use relied on the same type of provider across all of the segments of use. Forty-five percent were consistent in the choice of a public provider, 31 percent always went to private source, while 5 percent consistently got the IUD from a NGO/PVO clinic.

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Table 4 Percent distribution of IUD users reporting multiple segments of use during the five-year period prior to the survey by the type of source from which method was obtained during the segments of use according to the number of segments of use, Egypt DHS 2000.			
Source	Two	Three	Total reporting multiple segments of IUD use
Always same type	81.3	69.6	81.0
Public	45.0	33.4	44.7
NGO/PVO	5.3	5.3	5.3
Private	31.0	30.9	31.0
Different types of sources	18.7	30.4	19.0
Total Percent	100.0	100.0	100.0
Number of women	776	20	797
NGO=nongovernmental organization PVO=private voluntary organization Note: Private includes private doctor/clinic and mosque/church clinic			

Table 5 indicates that, like IUD users, pill users tend to be consistent in the choice of provider across multiple segments of use. Only around 20 percent of pill users switched between a clinical source and the pharmacy. More than half pill users consistently got their method from the pharmacy, and one woman in every four obtained it from clinical sources. Among those pill users who consulted clinical sources, this group of women also tended to be consistent in the choice of the type of clinical provider. 91 percent were consistent while only 9 percent used different types of providers. Among consistent users, 80 percent always used private sources while 11 percent relied on public sources.

Table 5 Percent distribution of pill users reporting multiple segments of use during the five-year period by consistency in the kind of provider (clinical versus pharmacy/other) from which the pill was obtained according to the number of segments of use, Egypt DHS 2000.				
Source	Two	Three	Four/ more	Total reporting multiple segments of pill use
Always same type	79.3	80.2	94.6	80.3
Always clinical source	25.3	20.5	27.8	24.7
Always pharmacy	54.0	59.7	66.8	55.6
Clinical and pharmacy	20.4	19.8	5.4	19.7
Total Percent	100.0	100.0	100.0	100.0
Number of users	274	58	18	350

Effect of Women's characteristics on Choice of Family Planning Providers

Recently, studies of the demand for health care have examined the effect of various provider characteristics on consumers' choice of provider for general medical care. In the family planning literature, estimation of the effects of quality characteristics of providers on choice of provider has lately been attempted.¹¹ The focus has always been the provider's characteristics. The users' or consumers' perspective is usually treated as a side issue. This article attempts here to further examine the determinants of the type of provider on which Egyptian women rely. The basic model used for exploring this question is a standard utility maximizing model which assumes that choice of provider is a function of the age of individual client, her educational status, work status, husband's occupation, number of living children, region of residence, household wealth, and type of method. The binomial logit model is used and the odds ratios are estimated.

Several model specifications are tested. Model 1 includes all users of the pill, IUD, and injectables who obtained their method from either a public sector provider or from a private doctor/clinic; users getting the method from other types of sources are excluded from the analysis. Model 2 is limited to users who also had a birth in the five-year period before the survey. In addition to the basic socio-demographic variables, a variable on the use of antenatal care services is introduced into this model. Model 3, which is limited to users who had a birth and obtained antenatal care services, includes a variable on the type of provider from which the antenatal care for the last birth was obtained.

The results of Model 1 indicate that the older the woman is the higher her odds to choose private family planning providers. Older women (40-49) have double the odds to go to

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private sources compared to younger women (15-24). IUD and Injectables users have at least thirteen times the odds for choosing a public source than pill users have. Increased education is associated with reliance on private provider. Somewhat surprisingly, employed women are more likely to go to public providers. Probably this result is due to that employed women mainly work in the public sector which is linked to a public health care and health insurance systems. Women married to men working in managerial/technical/professional jobs are more likely to get their contraceptive methods from private providers than others. Rural Upper Egypt residents tend to go to public sector providers. Surprisingly, household wealth is not significantly associated with the type of provider from which the user obtained her method.

The addition of use of antenatal care in the second model provides some additional insight into the patterns of provider choice. Users who had given birth in the five-year period and received antenatal care were significantly more likely to have obtained a method from a private provider. It is worth noting that age is no longer important in determining type of provider which may be related to the fact that older users who had a recent child are a select subset of all users in those age groups. Confining the analysis to those who received antenatal care (Model 3), the consistency of provider choice is clear; women going to public providers for antenatal care tend to go to public providers for their family planning method, almost four times the odd of going to a private provider.

The study considers two more subsets of users, namely IUD and pill users. For IUD users, the results parallel the findings for all users in Table 6. Older and more educated IUD users and those married to men in managerial/technical/professional occupations are

Table 6 Odds ratios of binomial logit models for choice of type of family planning provider			
Explanatory Variables	Dependent Variable: Type of family planning provider (Private=0; Public=1)		
	Model 1	Model 2	Model 3
Age			
15-24	Rc	Rc	Rc
25-39	0.854*	0.954	0.915
40-49	0.591***	0.764	0.573
Number of living children			
0-3 children	Rc	Rc	Rc
4 or more children	1.108	0.970	1.047
Type of contraceptive method			
Pill	Rc	Rc	Rc
IUD	13.475***	13.417***	10.493***
Injectables	43.118***	42.857***	31.019***
Region			
Urban Governorates	Rc	Rc	Rc
Urban Lower Egypt	1.017	1.096	1.158*
Rural Lower Egypt	1.099	1.257*	1.272
Urban Upper Egypt	1.011	1.101	1.059
Rural Upper Egypt	1.297**	1.453***	1.367*
Frontier Governorates	1.144	1.169	0.954
Education			
No education	Rc	Rc	Rc
Primary complete	1.061	1.267**	1.259
Primary complete/some secondary	0.640***	0.757***	0.758**
Secondary/higher	0.268***	0.360***	0.415***
Women's work status			
Not working for cash	Rc	Rc	Rc
Working for cash	1.325***	1.332***	1.356**
Husband's occupation			
Other/Not working	Rc	Rc	Rc
Professional/technical/managerial	0.695***	0.715***	0.698***
Household wealth index score			
1	Rc	Rc	Rc
2-4	1.001	1.059	1.136
5	0.847	0.956	1.020
Antenatal care			
No	Rc	Rc	Rc
Yes		0.691***	
Antenatal care provider			
Private	Rc	Rc	Rc
Public			4.374***
Constant	0.176***	0.166***	0.098***
N (number of women)	6647	4063	2336
Df	17	18	18
-2 Log Likelihood	7340.010	4401.632	2544.701

Rc = reference category for the variable.
***p<0.01; **p<0.05; *p<0.10

more likely to obtain the method from private providers. Employed women are more likely to go to public providers. Rural Upper Egypt users are more likely to rely on

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public sources. Wealth apparently has no bearing on women's choice of one type of provider over the other.

With respect to the pill, the tested model considers the determinants of the likelihood of getting the method from the pharmacy at the pharmacy versus a clinical provider. None of the variables are significantly related to type of provider with the exception of residence in rural Lower Egypt where users have lower odds to getting the pill from pharmacy. It was hypothesized that the lack of fit for other determinants might be due to the very high prevalence use of pharmacy since 84 percent of users obtain the pill at a pharmacy. However, when a model was run in which the group of pill users was limited to those who consulted a clinical source at the beginning of the segment of use, none the socioeconomic determinants of interest were related to the type of clinical provider (not shown in table).

Concluding Remarks and Policy Implications

A number of conclusions can be drawn from this examination of family planning providers. First of all, the study confirms the fact that there are marked differences in the extent to which Egyptian women rely on public or private providers for family planning services depending on the type of method they are seeking. This is perhaps most clearly illustrated in the well-known association between the type of method used and the source from which women seek contraceptive services. Pharmacies supply the vast majority of pill users, public facilities serve the vast majority of injectable users while IUD users are more equally divided between those seeking services from public sector providers and those obtaining the method from private providers.

The study offers insights into a number of other aspects of family planning service provision about which there has been less previous investigation. Among the more important findings is the consistency women display in the choice of provider. The majority of women reporting multiple segments of use of the same family planning in the five-year period before the survey reported obtaining the method from the same type of source at each segment of use.

With regard to the determinants of the choice of provider for family planning services, perhaps the most interesting finding is that household wealth was not a significant determinant of the choice of provider. This may reflect that private sources meet the demand for family planning services of significant proportions of women in rural areas and among those in the low income groups. Also, significant numbers among those in the high income groups are almost paying nothing to get their methods. This finding has significant policy implications since it suggests that public subsidies are not reaching those in need the most. More in-depth analysis is needed to identify causes of such distortions in the service delivery system and ways to correct it.

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