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An Analysis of Family Planning Client Records
for
The Family Life Association of Swaziland (FLAS)

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Introduction

The purpose of this paper is to provide some baseline information for the Family Life Association of Swaziland (FLAS) on the results of their efforts to provide family planning information and services to Swazi women and men, particularly teenagers. FLAS has been in operation since 1979 and began to provide contraceptives in 1980. Client record cards have been maintained for each new family planning client who came to a FLAS clinic. However until the current effort, the information on those cards was not used to trace FLAS's progress except to maintain a count of new and continuing users. The current data analysis was requested by FLAS as part of the organizations efforts to outline its long range plans for expansion beyond its three urban clinics, Manzini, Malkerns and Mbabane, and was made possible by the cooperation of several parties-- an AID intern who organized the data collection by designing the sampling frame and designing the coding sheet; the office assistance at FLAS/Manzini who coded and entered the data; the Statistics Division at the Ministry of Health for the generous use of their computer equipment and expertise; and USAID/Mbabane who initiated the whole exercise. The paper is organized into three sections: 1) a descriptive analysis of FLAS's client characteristics; 2) a discussion of the contraceptive methods used by FLAS clients and the length of their use; and 3) an analysis of several two-way tables relating client characteristics to method and length of use. Additional technical information on the data can be found in Appendix 2.

Description of Client Characteristics

The following discussion of FLAS clients is based on Tables 1-9 in Appendix 1. The clients have been broken down by clinic but not by year of visit. Further in this discussion there is no distinction between one-time and continuing visitors.

Branch (Tables 1-2)

Of the estimated 4374 clients served by FLAS since 1980 (See appendix 2 for the derivation of that estimate), 60.5% have been served in the Manzini clinic, 28.4% in Mbabane and 11.1% in Malkerns. Since the clinics did not open in the same year, these differences reflect mainly the number of years of service: Manzini since 1980, Mbabane since 1983 and Malkerns since 1984. Table 2 shows the city distribution of FLAS clients which is consistent with, but not identical to, the distribution by clinic.

Age and Sex Distribution (Tables 3-4)

In general FLAS serves quite a young clientele. Almost 60% have been younger than 25 and only 15% have been 35 or older. The average age of the FLAS client is 24 years. There are slight differences among the three clinics, with Manzini serving a slightly younger clientele and Malkerns a slightly older one. About 88% of the clients have been women and 12% men. Manzini has served more male clients (85%female/15% male); Mbabane is in the middle (90% female/10% male); and Malkerns has served mainly women

(97% female/3% male).

Number of Living Children (Table 5)

Given the age distribution of FLAS's clients, it is not surprising that almost 70% have had 2 or fewer children. Nor is it inconsistent with the age and sex distribution by clinic that the Malkerns clients have had more children than the overall FLAS totals. As will be highlighted below, there are noticeable difference among the three clinics in education, occupation, and marital status, all of which coalesce to form a picture of a Malkern's client being slightly more likely to have higher fertility--older, married, less well educated and in a lower skill job. These difference may be in part traced to the location of the clinics. Malkerns is in a site with several factories and not as accessible to teenagers.

Education (Table 7)

The FLAS clientele appears to be quite well educated and it would be instructive to compare this educational distribution to that for urban Swaziland as a whole. As mentioned above, the Malkerns clients are less well educated: 16% have had no education compared to 4% in Mbabane and 5% in Manzini. Only 10% have proceeded to Forms 4-5 in Malkerns while 54% have in Mbabane and 40% in Manzini.

Marital status and Occupation (Tables 8-9)

Although the information on marital status was missing for almost half the cases it is clear that FLAS is providing most of its services to unmarried women. This is consistent with its mission to serve the adolescent population of Swaziland. Very few of the clients are either divorced or widowed. Slightly more than half of the clients are employed away from home as either general laborers or in professional positions. Another 16% are students and 20% are housewives or self-employed. The Manzini clinic serves more students, Malkerns more general laborers and Manzini more professional clients.

Referral to a FLAS clinic (Table 10)

FLAS's educational efforts through radio and the newspapers have attracted about 18% of its clients overall--21% in Manzini, 18% in Mbabane but only 2% in Malkerns. (This is not inconsistent with the educational data mentioned above.) However, overall, word-of-mouth is the primary means through which clients come into FLAS. 64% have come on the advice of friends or relatives--63% in Manzini, 72% in Malkerns, and 63% in Mbabane. Very few clients have been referred to FLAS by health professionals.

Contraceptive Methods and Length of Use

This section looks at the information in the FLAS data concerned with contraceptive method and length of use. The discussion is based on tables 10-18 in Appendix 1. The information provided in the FLAS data cannot be use to calculate continuation rates using life table techniques, but tables 11- do give some idea about the use patterns of clients vis a vis the FLAS clinic they

initially visited. All the information on months of use, while approximating length of time between visits, is actually the length of time between change of method. The reason for this interpretation is because of the way the data were drawn from the client record cards and is explained in more detail in Appendix 2.

First Family Planning Method (Table 10)

Overall, birth control pills are the most commonly prescribed initial method, followed by injectables, condoms, foam, IUD, and diaphragm. The most noticeable difference from this pattern is in Malkerns where 58% of the women receive injections as their first method. As Mrs. Nkosi, the Family Life Practitioner in Malkerns, explained, her clients come in specifically for injections which the general clinics in the factories near her clinic won't give out. IUDs are more common in Mbabane. It might be interesting to try and determine if this is a "real" difference between clinics or merely the result of the unintended sampling mistakes mentioned in Appendix 2. That Manzini has more condom clients is not surprising given that they also have more male clients.

Months of contraceptive use (Tables 11-15)

Table 11 indicates that overall, 50% of FLAS clients never come back for a second visit to the FLAS clinic where they went initially. (Note--these figures are actually months until change of method and are complicated because change of brand of birth control pill counted as a change of method.) About 37% come back within 6 months, and a few have gone as long as 48 months without a change of method. The three clinics do not vary much in their pattern of revisits, although Manzini has a slightly higher no-revisit-rate. Of course it is not possible for Malkerns to have had long gaps between method changes since that clinic has only been in operation a short time. Table 12 looks at the length of time between receiving a second method and coming back for a third. 61% never return a third time overall. In Manzini, however, over half eventually come back for a third visit--38% within 6 month. In Malkerns the data appear to show a very high dropout rate--85% never come back for a third visit after having had a second. However, given the short span the clinic has been open, many clients may not have had a chance to come back. The pattern for a fourth visit, given a third change of method is much the same--about 60% of the clients who do come in for a change of method do not come back. While these data do appear to indicate a high discontinuation rate, two mitigating factors must be mentioned. First, some women may be satisfied with their current method and have had no reason to come back to the clinic--e.g. IUD users and recent clinic visitors. Second, there is at present no way of knowing how common it is for women in Swaziland to seek contraceptives from other sources. They may have dropped out of FLAS but not out of family planning.

Table 14 summarizes the data on months of use. Months between each change of method have been totalled and Table 14 shows the frequency distribution for total months of contraception

regardless of method. Again the data show that 49% of the clients never return. Of the remainder 27% use for between 1 and 6 months, 11% for 7-12 months, and 13% for 13-48 months. Mbabane has a slightly lower drop-out rate than Manzini, but this may be the result of the unintended differences in sampling mentioned above. The Malkerns clinic has so far experienced the lowest drop-out rate of all.

Relationship between contraceptive method and months of use

Table 15 shows the relationship between initial contraceptive method and total months of use. By comparing the individual cells percentages with the row% column which represents total use regardless of method we can see which methods, if any, are likely to provide longer total use. Again it is necessary to caution that this only means use of supplies obtained at a FLAS clinic. Looking at 0 months, i.e. clients who never returned the results are not too surprising. Those methods which need more medical attention--pills, IUDs and injectables have lower than overall non-use rates. Those methods which might be easily obtained outside the clinic or which do not need to be renewed--diaphragms, foam and condoms--have higher than overall drop-out rates. Looking at the 1-6 month total use row, IUD and injection clients are more likely than the overall clientele to use for this time period. Pill clients are slightly less likely to use for 1-6 months but are slightly more likely to use for 7-12 months. In general this table shows us that women who choose methods which must be renewed are slightly more likely to come back--not really a surprising result.

Relationship between months of use and client characteristics

Tables 18 and 19 highlight the relationship between client age and number of living children and total months of contraceptive use regardless of method. Women with no children are much more likely than the overall clientele to have 0 months of use while those with 3 or more children are slightly less likely to drop out. As the continuation of that same trend rows 2 and 3 show that women with more children are more likely to use for 7-12 and 13-18 months. Having a larger family is a strong motivation to continue contracepting. As for the relationship between age and months of use, the relationship is not as straightforward as the parity table. Both younger and older women are more likely to drop out, and women in their 30s are more likely to continue using for up to a year. This information forms an interesting contrast to the age distribution of FLAS clients which is very young (average age of 24). While FLAS is attracting young people to their clinics, it is not convincing them to come back.

Conclusions

FLAS is a young organization and many of its programs appear to be working well, for example its IEC efforts over the radio and in the newspapers. It is providing contraceptive services to several thousand people, mainly young women. While approximately half the clients do not return to FLAS for a second visit, the current

analysis cannot indicate whether these clients are truly dropping out or whether they are switching source of supply. That teenagers are dropping out at a faster rate than the overall clientele is an aspect of the program that needs some thought.

Much more could be gleaned about the FLAS program and the clients it is serving using the data currently stored in the MOH Division of Statistics computer which unfortunately I have not had time to process. There remain some inconsistencies in the numbers and many unexplored relationships. Any future data collection projects might want to include information on the effect of previous contraceptive use and whether clients who come in for other services are motivated to adopt family planning.

Appendix 1: Tables

Table 1:
Number of clients per branch
(based on weighted sample)

Branch	number of clients	percent
Manzini	2646	60.5%
Malkerns	486	11.1%
Mbabane	1242	28.4%
total	4374	100.0%

Table 2:
City distribution of FLAS clients

City	FLAS		Manzini		Malkerns		Mbabane	
	#	%	#	%	#	%	#	%
Manzini	2325	53.4%	2266	86.0%	16	3.4%	43	4.0%
Malkerns	483	11.1%	24	1.0%	452	95.0%	7	1.0%
Mbabane	1082	24.8%	76	3.0%	4	00.8%	1002	81.1%
Big Bend	10	**	10		0		0	
Siteki	47	1.0%	40	2.0%	0		7	1.0%
Bulembu	3		0		0		3	
Black Mbuluzi	0		0		0		0	
Bhekinkosi	2		2		0	0.0%	0	
Bhunya	17		16	1.0%	1	0.2%	0	0.0%
Ezulwini	44	1.0%	14	1.0%	0		30	2.0%
Emhlaleni	2		2		0		0	
Ekukhanyeni	2		2		0		0	
Enqulwini	0		0		0		0	
Enyakeni	0		0		0		0	
Gundwini	0		0		0		0	
Hlathitkhulu	10		0		0		10	1.0%
Hluti	9		2		0		7	1.0%
Khutuba	5		2		0	0.0%	3	0.0%
Kabhudla	0		0		0		0	
Ludzeludze	3		2		1	0.2%	0	
Luyengo	7		6		1	0.2%	3	
Luve	24		24	1.0%	0		0	
Lavumisa	2		2		0		0	
Lobamba	60	1.4%	26	1.0%	1	0.2%	33	3.0%

Table 2 continued:

<u>City</u>	<u>FLAS</u>		<u>Manzini</u>		<u>Malkerns</u>		<u>Mbabane</u>	
	#	%	#	%	#	%	#	%
Moneni	2		2		0		0	
Mankayana	8		8		0		0	
Mahlanya	2		2		0		0	
Maliyaduma	2		2		0		0	
Maphiveni	2		2		0		0	
Mkhuzweni	10		10		0		0	
Mpaka	14		14	1.0%	0		0	
Matsenjwa	1		0		0		0	
Motshane	35	1.0%	2		0		33	3.0%
Mhlume	3		0		0		3	
Mzimpofu	13		10		0		3	
Mhlambanyatsi	7		0		0		7	1.0%
Matapa	0		0		0		0	
Mafulseni	6		6		0		0	
Nsoko	2		2		0		0	
Nkambeni	2		2		0		0	
Nhlangano	9		6		0		3	
Ntfontjeni	1		0		0		3	
Ngwenya	12		2		0		10	1.0%
Pigg's Peak	15		12		0		3	
Sidvokodvo	16		16	1.0%	0		0	
Sinceni	0		0		0		0	
Sipofaneni	7		4		0		3	
Tsosheni	0		0		0		0	
Tshaneni	9		6		0		3	
Thulwane	2		2		0		0	
Kwaluseni	27		20	1.0%	0		7	1.0%
Siganeni	3		0		0		3	
total	4365	100.0%	2646	100.0%	476	100.0%	1237	100.0
**cities with no percentage indicator contribute less than 1% to the total.								
missing cases	17				0		10	7

Table 3:
Age distribution

<u>Age group</u>	<u>FLAS</u>		<u>Manzini</u>		<u>Malkerns</u>		<u>Mbabane</u>	
	#	%	#	%	#	%	#	%
10-19	810	18.6%	536	20.3%	74	15.4%	200	16.1%
20-24	1786	41.0%	1104	41.8%	183	38.2%	499	40.2%
25-29	1110	25.5%	640	24.3%	120	25.1%	350	28.2%
30-34	453	10.4%	256	9.7%	70	14.6%	127	10.2%
35-39	140	3.2%	62	2.4%	25	5.2%	53	4.3%
40+	60	1.4%	40	1.5%	7	1.5%	13	1.1%
total	4359	100.0%	2638	100.0%	479	100.0%	1242	100.0%
missing cases	15		8		7		0	

Table 4:
Sex distribution

<u>Sex</u>	<u>FLAS</u>		<u>Manzini</u>		<u>Malkerns</u>		<u>Mbabane</u>	
	#	%	#	%	#	%	#	%
Female	3853	88.3%	2268	85.8%	469	97.1%	1116	90.3%
Male	510	11.7%	376	14.2%	14	2.9%	120	9.7%
total	4363	100.0%	2644	100.0%	483	100.0%	1235	100.0%
missing cases	12		2		3		7	

Table 5:
Number of Living Children

<u>Number of Children</u>	<u>FLAS</u>		<u>Manzini</u>		<u>Malkerns</u>		<u>Mbabane</u>	
	#	%	#	%	#	%	#	%
0	1092	25.0%	750	28.4%	42	8.7%	300	24.1%
1-2	1941	44.4%	1096	41.5%	229	47.2%	616	49.6%
3-4	911	20.9%	538	20.4%	137	28.2%	236	14.0%
4+	423	9.7%	256	9.7%	77	15.8%	90	7.2%
total	4367	100.0%	2640	100.0%	485	100.0%	1242	100.0%
missing cases	7		6		1		0	

Table 6:
Education

<u>Educational level</u>	<u>FLAS</u>		<u>Manzini</u>		<u>Malkerns</u>		<u>Mbabane</u>	
	#	%	#	%	#	%	#	%
none	280	6.4%	154	5.4%	79	16.3%	46	3.8%
Standards 1-3	195	4.5%	114	4.3%	51	10.5%	30	2.4%
Standards 4-5	480	11.0%	266	10.3%	117	24.1%	97	7.8%
Forms 1-3	1564	35.8%	1040	39.3%	178	36.6%	346	27.9%
Forms 4-5	1791	41.0%	1072	40.5%	50	10.3%	669	53.9%
University	63	1.4%	0	0.0%	10	2.1%	53	4.3%
total	4373	100.0%	2640	100.0%	485	100.0%	1242	100.0%
missing cases	1		6		1		0	

Table 7:
Marital Status

<u>Status</u>	<u>FLAS</u>		<u>Manzini</u>		<u>Malkerns</u>		<u>Mbabane</u>	
	#	%	#	%	#	%	#	%
single	1996	72.7%	844	69.3%	356	80.7%	766	73.2%
married	711	26.3%	364	29.9%	81	18.4%	266	25.5%
divorced	13	0.5%	4	0.2%	2	0.5%	7	0.6%
widowed	15	0.5%	6	0.2%	2	0.5%	7	0.6%
total	2505	100.0%	1218	100.0%	441	100.0%	1046	100.0%
missing cases	1869		1422		45		196	

this large number of missing cases may be due to inconsistent coding or data entry.

Table 8:
Occupation

<u>Occupation</u>	<u>FLAS</u>		<u>Manzini</u>		<u>Malkerns</u>		<u>Mbabane</u>	
	#	%	#	%	#	%	#	%
General labor	1806	44.7%	964	38.3%	233	72.4%	609	50.8%
Student	659	16.3%	458	18.2%	15	4.7%	186	15.6%
Self-employed*	792	19.6%	622	24.7%	43	13.4%	127	10.6%
Professional	395	9.8%	316	12.6%	16	5.0%	63	5.3%
Unemployed	384	9.5%	156	6.2%	15	4.7%	213	17.8%
total	4037	100.0%	2156	100.0%	3422	100.0%	1199	100.0%
missing cases	337		130		164		43	

*includes agriculture and housewife

Table 9:
How referred to FLAS clinic

<u>Source</u>	<u>FLAS</u>		<u>Manzini</u>		<u>Malkerns</u>		<u>Mbabane</u>	
	#	%	#	%	#	%	#	%
Media	611	17.8%	412	21.4%	9	1.9%	190	18.2%
Doctor	84	2.5%	70	3.6%	1	0.2%	13	1.3%
Nurse	159	4.6%	38	2.0%	78	16.6%	43	4.1%
Health worker	148	4.3%	124	6.5%	4	0.9%	20	1.9%
Relative	760	22.1%	496	25.6%	38	8.1%	226	21.7%
Friend	1443	42.0%	712	37.0%	301	64.2%	430	41.1%
In passing	185	5.4%	48	2.5%	37	7.9%	100	9.6%
Employer	36	1.1%	12	0.6%	1	0.0%	23	2.2%
Chemist	10	0.3%	10	0.5%	0	0.0%	0	0.0%
total	3437	100.0%	1922	100.0%	469	100.0%	1046	100.0%
missing cases	937			724		17		196

Table 10:
First FP method given by FLAS Clinic

<u>Occupation</u>	<u>FLAS</u>		<u>Manzini</u>		<u>Malkerns</u>		<u>Mbabane</u>	
	#	%	#	%	#	%	#	%
None	180	4.2%	92	3.6%	28	5.8%	60	5.0%
Pills	1522	35.7%	986	38.2%	130	26.9%	406	34.1%
IUD	374	8.8%	118	4.6%	23	4.8%	233	19.6%
Diaphragm	31	0.7%	16	0.6%	2	0.4%	13	1.1%
Injectable	956	22.7%	520	20.1%	279	57.6%	167	14.0%
Foam/Jelly	584	13.7%	378	14.6%	10	2.1%	196	16.5%
Condom	601	14.1%	472	18.3%	12	2.5%	117	9.8%
total	4258	100.0%	2582	100.0%	484	100.0%	1192	100.0%
missing cases	116			64		2		50

Table 11:
Months between receiving initial FP method
and return visit to same FLAS clinic for new method*

<u>Months</u>	<u>FLAS</u>		<u>Manzini</u>		<u>Malkerns</u>		<u>Mbabane</u>	
	#	%	#	%	#	%	#	%
Ø	2340	50.5%	1380	52.2%	234	48.1%	603	48.5%
1-6	1705	36.8%	860	32.5%	213	43.8%	453	36.5%
7-12	365	7.9%	222	8.4%	32	6.6%	120	9.7%
13-18	132	2.9%	92	3.5%	7	1.4%	57	4.6%
19-24	51	1.1%	50	1.9%	Ø		1	
25-30	24		24		Ø		Ø	
31-36	11		11		Ø		1	
37-42	7		5		Ø		2	
41-48	2		2		Ø		Ø	
total	4374	100.0%	2646	100.0%	486	100.0%	1244	100.0
missing cases	Ø		Ø		Ø		Ø	

* Ø means that a client came once but never revisited her initial FLAS clinic. There is no way of checking whether a given client visited a second FLAS clinic. These results cannot be strictly interpreted as months between visits because of the way the data were entered (see Appendix 2). The correct interpretation is months between change of method--including change between brand of birth control pills.

Table 12:
Months between receiving second FP method
and return visit to same FLAS clinic for new method

<u>Months</u>	<u>FLAS</u>		<u>Manzini</u>		<u>Malkerns</u>		<u>Mbabane</u>	
	#	%	#	%	#	%	#	%
Ø	1414	61.5%	576	45.5%	215	85.3%	406	63.6%
1-6	643	28.0%	484	38.2%	32	12.7%	173	27.1%
7-12	133	5.8%	110	8.7%	3	1.2%	43	6.7%
13-18	71	3.1%	60	4.7%	2		13	2.0%
19-24	23	1.0%	22	1.7%	Ø		3	
25-30	8		8		Ø		Ø	
31-36	6		6		Ø		Ø	
total	2298	100.0%	1266	100.0%	252	100.0%	638	100.0
missing cases	Ø		Ø		Ø		Ø	

Table 13:
Months between receiving third FP method
and return visit to same FLAS clinic for new method*

<u>Months</u>	<u>FLAS</u>		<u>Manzini</u>		<u>Malkerns</u>		<u>Mbabane</u>	
	#	%	#	%	#	%	#	%
Ø	508	57.6%	390	56.5%	23	62.2%	143	59.6%
1-6	291	33.0%	226	32.7%	14	37.8%	60	25.0%
7-12	49	5.5%	42	6.1%	Ø		23	9.6%
13-18	24	2.7%	22	3.2%	Ø		7	2.9%
19-24	2		2		Ø		7	2.9%
25-30	6		6		Ø		Ø	
31-36	2		2		Ø		Ø	
total	882	100.0%	690	100.0%	37	100.0%	240	100.0
missing cases	Ø		Ø		Ø		Ø	

Table 14:
Distribution of total months of use of any contraceptive
method dispensed by FLAS Clinic of initial visit

<u>Months</u>	<u>FLAS</u>		<u>Manzini</u>		<u>Malkerns</u>		<u>Mbabane</u>	
	#	%	#	%	#	%	#	%
Ø	2263	48.8%	1332	50.2%	228	42.2%	573	46.1%
1-6	1270	27.4%	486	18.4%	205	42.2%	336	27.1%
7-12	508	11.0%	320	12.1%	43	8.8%	150	12.1%
13-18	262	5.6%	188	7.1%	9	1.9%	147	11.8%
19-24	161	3.5%	152	5.7%	1		20	1.6%
25-30	107	2.3%	106	4.0	Ø		1	
31-36	36		34	1.3	Ø		2	
37-42	24		24		Ø		Ø	
43-48	6		6		Ø		Ø	
total	4374	100.0%	2646	100.0%	486	100.0%	1244	100.0
missing cases	Ø		Ø		Ø		Ø	

Table 15:
Cross tabulation of total months of use of any
FP method and initial method received (in percent)

months	method							row %
	none	pills	IUD	Diaph.	Injec.	foam	condom	
0	67.4	44.9	44.3	77.7	39.0	56.9	74.3	48.9
1-6	8.7	23.8	34.5	7.5	43.1	16.7	10.3	27.7
7-12	12.0	14.1	10.8	0.0	10.4	9.1	4.6	10.8
13-18	8.5	8.2	3.1	0.0	2.5	8.5	3.5	5.5
19-24	1.0	4.9	3.0	7.5	2.3	4.0	2.2	3.4
25-30	1.0	2.7	2.3	0.0	1.7	2.6	3.7	2.4
31-36	0.5	0.4	1.9	0.0	1.1	0.9	0.4	0.7
37-42	1.0	0.8	0.0	0.0	0.0	0.9	1.1	0.1
43-48	0.0	0.1	0.0	7.5	0.0	0.4	0.0	0.1
totals	100	100	100	100	100	100	100	100.0

n=4374

Table 16:
Cross tabulation of initial FP method and
second FP method received (in percent)

1st method	2nd method							row %
	none	pills	IUD	Diaph.	Injec.	foam	condom	
none	3.1	4.0	3.4	20.0	1.4	3.6	0.0	2.7
pills	44.9	70.0	13.4	0.0	8.6	33.9	3.6	36.4
IUD	0.0	1.7	72.2	0.0	1.7	3.6	0.9	6.8
Diaphragm	0.0	0.4	0.0	0.0	0.2	0.0	1.8	0.3
Injection	30.6	11.5	1.9	0.9	82.7	4.8	1.8	39.1
Foam/Jelly	21.4	9.8	7.9	80.0	3.9	51.8	3.6	8.8
Condom	0.0	2.5	1.1	0.0	1.5	2.4	88.4	5.9
totals	100	100	100	100	100	100	100	100.0

n=2463

Table 17:
Cross tabulation of second FP method and
third FP method received (in percent)

2nd method	3rd method							row %
	none	pills	IUD	Diaph.	Injec.	foam	condom	
none	9.8	0.7	3.4	0.0	0.0	0.0	0.0	0.9
pills	9.8	72.1	32.8	0.0	31.3	41.6	40.9	58.4
IUD	26.2	3.1	56.9	0.0	2.1	17.9	0.0	7.7
Diaphragm	0.0	0.5	1.7	0.0	0.0	0.0	9.1	0.3
Injection	54.1	18.1	0.0	0.0	61.7	37.0	9.1	26.4
Foam/Jelly	0.0	4.2	5.2	0.0	3.5	3.5	4.5	4.0
Condom	0.0	1.3	0.0	0.0	1.2	0.0	36.4	2.0
totals	100	100	100	100	100	100	100	100.0

n=394

Table 18:
Cross tabulation of third FP method and
fourth FP method received
(in percent)

3rd method	4th method						row %
	none	pills	IUD	Injec.	foam	condom	
none	41.5	0.0	0.0	5.2	0.0	0.0	2.1
pills	41.7	83.5	46.7	41.1	56.5	81.8	72.3
IUD	8.3	2.6	40.0	0.0	8.7	18.2	4.6
Injection	8.3	6.7	0.0	4.7	17.4	0.0	13.5
Foam/Jelly	0.0	5.7	6.7	4.7	17.4	0.0	5.9
Condom	0.0	1.3	0.0	1.2	0.0	0.0	1.5
totals	100	100	100	100	100	100	100.0

n=176

Table 19:
Cross tabulation of total months of use of any
FP method and number of living children
(in percent)

months	number of children				row%
	0	1-2	3-4	5+	
0	61.5	46.7	43.9	43.4	48.8
1-6	15.2	29.5	30.6	35.8	27.4
7-12	8.1	11.6	12.3	11.5	11.0
13-18	6.5	5.3	6.6	3.4	5.7
19-24	4.0	3.4	3.2	3.0	3.4
25-30	2.7	2.3	2.3	1.9	2.3
31-36	0.8	0.9	0.4	0.7	0.7
37-42	1.1	0.2	0.6	0.4	0.5
43-48	0.2	0.1	0.2	0.0	0.1
totals	100	100	100	100	100.0

n=

Table 20:
Cross tabulation of total months of use of any
FP method and client age (in percent)

months	method						row %
	10-19	20-24	25-29	30-34	35-39	40+	
0	55.3	47.4	45.6	46.2	53.9	62.9	48.7
1-6	23.2	25.8	31.2	31.8	28.5	25.2	27.4
7-12	8.1	11.9	10.9	13.5	17.0	5.9	10.9
13-18	7.1	6.6	4.7	3.9	3.1	0.0	5.7
19-24	3.2	3.5	4.1	2.3	5.0	3.0	3.5
25-30	1.7	2.8	2.6	1.1	2.5	0.9	2.3
31-36	1.2	1.1	0.5	0.4	0.0	0.0	0.8
37-42	0.2	0.6	0.3	0.8	0.0	3.0	0.5
43-48	0.0	0.3	0.0	7.5	0.0	0.4	0.1
totals	100	100	100	100	100	100	100.0

n=

Appendix 2:

technical notes on the data:

The statistical analysis of client characteristics and months of contraceptive use for the Family Life Association of Swaziland (FLAS) was based on a sample of the client record cards filled out for each new client who comes to a FLAS clinic. As highlighted in the text, FLAS is currently operating three clinics. The Manzini Clinic opened in 1980 and has had an estimated 2537 clients. The Mbabane clinic opened in 1983 and when the sampling was done was thought to have had about 1100 clients. However, the Family Life Practitioner at that clinic, Mrs. Gamboli indicated that, unlike the other clinics, she had weeded out the cards in 1984, separating continuing clients from those who never returned to her clinic. The actual number of clients is not known but is thought to be about double the number of cards which were used for the sample. The Malkerns clinic opened in 1984 and has served about 475 clients. The original sampling scheme was supposed to be every 5th card in Manzini, every 3rd card in Mbabane and every card in Malkerns. However an initial look at the data showed there were many more than the projected 507 record from Manzini included in the data set--1323 to be exact--and the difference was found to be in the sampling, not the estimated number of total clients. The number of cases for Malkerns and Mbabane was as projected; however, as noted above, the actual sample from Mbabane is perhaps a sixth instead of a third and biased toward continuing clients. The final sample was 2194 cases--486 from Malkerns, 373 from Mbabane, 1323 from Manzini and 14 with missing values (presumably typographical errors made during the data entry process). All the analysis in this study is based on reweighting the data to account for sampling differences: a weight of 2 for Manzini, 1 for Malkerns and 3.33 for Mbabane.

One additional note on the sampling is that the person coding the cards was instructed to skip any card which did not cite family planning as the reason for the initial visit. This gives a biased estimation (in an unknown direction) of what attracts clients to a FLAS clinic since the organization does provide STD services, pregnancy tests, infertility counselling and other services. It would have been interesting to know if clients who came in for non-FP service initially were also motivated to adopt contraception.

In assessing the quality of the data, most of the variables concerned with client characteristics were satisfactory. The only two which seemed more unreliable were marital status--for which there were a lot of missing values-- and occupation for which the categories were not well defined. Self-employed, for example, included both housewives and agricultural workers who work their own, or their family's land. I suspect that the missing values for marital status are the result of coding confusion rather than failure to collect the information, but given the limited amount of time I had, I was unable to reconfirm my suspicions. Any

findings based on these two variables must be interpreted with caution.

In general a note of caution about missing values must be interjected. The data were entered through DBase3 and within that program any missing value, i.e. an entry line left blank, is assigned a Ø value. (Even if that were not so, the data entry person typed a Ø automatically for a missing value.) This kind of data entry is not a problem where Ø is not a feasible value, for example for client age, but does lead to questionable results where Ø is a possible result--years of education, number of living children. Therefore any results in the text of this analysis must be interpreted as representing only a best guess. Marital status is a good example. It is known from other sources that FLAS serves a lot of unmarried clients and this analysis supports that. However, given the large number of missing values, an accurate assessment of the married/unmarried ratio is not possible.

Dealing with the client characteristic data was a straight forward process. However, processing the information on dates of initial visit, dates of revisit, initial contraceptive method and subsequent methods was not, given a somewhat inconsistent way the data were entered. There were two separate ways of entering visit information. If a client returned to FLAS and changed FP method one or more times, the date of her subsequent visit(s) and method(s) were entered as separate visits. If, on the other had, a client returned to FLAS and maintained the same method, each visit was not entered as a separate event. Instead the beginning and ending dates (if known), regardless of the number of visits, for that particular method were entered. Because DBase3 demands that each case be entered according to the same data entry structure, the difference between the two forms of data collection had to be reconciled. The dates were entered as "from" and "to", as if revisit with no change of method were the most common option, and if there had been a change of method "from" and "to" were entered as the same date, and the revisit date was entered on the next date line as the next "from" date. The SPSSPC program for converting these two data entry processes to one consistent set of numbers representing months of use for each client regardless of method is attached. (The program should be available in the Ministry of Health statistic Division IBMXT computer in the Multimate Word Processing Package and is named FLAS.DOC.) The results can be interpreted as total months of use of commodities dispensed by the FLAS clinic where the client initially registered and not including current use. There is no way of knowing from these data if clients switched to other FLAS or MOH clinics and continued to contracept.

Appendix 3: SPSS Program for using FLAS Data

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```

data list file='flas.dat'
/ clientno 1-4 branch 5 day1 6-7 month1 8-9 year1 10-11
city 12-13 age 14-15 sex 16 akids 17-18 dkids 19
alpreg 20-21 edu 22 marsta 23 occ 24 referby 25-26
method1 27-29 returnd 30-31 returnm 32-33 returny 34-35
fday2 36-37 fmonth2 38-39 fyear2 40-41 tday2 42-43
tmonth2 44-45 tyear2 46-47 method2 48-50 fday3 51-52
fmonth3 53-54 fyear3 55-56 tday3 57-58 tmonth3 59-60
tyear3 61-62 method3 63-65 fday4 66-67 fmonth4 68-69
fyear4 70-71 tday4 72-73 tmonth4 74-75 tyear4 76-77
method4 78-80 fday5 81-82 fmonth5 83-84 fyear5 85-86
tday5 87-88 tmonth5 89-90 tyear5 91-92 method5 93-95
fday6 96-97 fmonth6 98-99 fyear6 100-101 tday6 102-103
tmonth6 104-105 tyear6 106-107 method6 108-110
fday7 111-112 fmonth7 113-114 fyear7 115-116
tday7 117-118 tmonth7 119-120 tyear7 121-122
method7 123-125 fday8 126-127 fmonth8 128-129 fyear8 130-131
tday8 132-133 tmonth8 134-135 tyear8 136-137 method8 138-140.
compute wvar=0.
if (branch eq 1) wvar=2.
if (branch eq 2) wvar=3.33.
if (branch eq 3) wvar=1.
weight by wvar.
recode branch (0,4=0).
recode age (10 thru 19=1) (20 thru 24=2) (25 thru 29=3)
(30 thru 34=4) (35 thru 39=5) (40 thru 52=6) (0,2=9).
recode akids (0=0) (1 thru 2=1) (3 thru 4=2) (5 thru 21=3)
(88,91,94=99).
recode edu (1=3) (2=4) (3=1) (4=2).
recode marsta (0,5=9).
recode referby (0,7,8,9,50,51,62,96=99).
missing values branch (9)
/ age (9)
/ sex (0)
/ Akids (99)
/ marsta (9)
/ occ (0)
/ referby (99).
recode month1,tmonth2 to tmonth8 (0,13 thru 99=93).
recode fmonth2 to fmonth8 (0,13 thru 99=99).
recode year1,tyear2 to tyear8 (0 thru 79,86 thru 99=00).
recode fyear2 to fyear8 (0 thru 79,86 thru 99=00).
recode method1 to method8 (0=0) (101,102,104,106,108,112,114=1)
(211,231,232,233=2) (311=3) (411,412=4) (511=5)
(711,712=7)
(11,40,100,103,105,107,111,181,213,223,313,331,484,512,583=999
missing values month1 year1 tmonth2 to tmonth8 fmonth2 to fmonth8
tyear2 to tyear8 fyear2 to fyear8 (99).
missing values method1 to method8 (999).
compute m1=0.
compute m2=0.
compute m3=0.
compute m4=0.

compute m5=0.1compute m6=0.
compute m7=0.
compute m8=0.
compute y1=0.
compute y2=0.

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compute m8=0.
compute y1=0.
compute y2=0.
compute y3=0.
compute y4=0.
compute y5=0.
compute y6=0.
compute y7=0.
compute y8=0.
compute m1=month1.
compute y1=year1.
if (tmonth2 ne fmonth2) m2=tmonth2.
if (tmonth3 ne fmonth3) m3=tmonth3.
if (tmonth4 ne fmonth4) m4=tmonth4.
if (tmonth5 ne fmonth5) m5=tmonth5.
if (tmonth6 ne fmonth6) m6=tmonth6.
if (tmonth7 ne fmonth7) m7=tmonth7.
if (tmonth8 ne fmonth8) m8=tmonth8.
if (tyear2 ne fyear2) y2=tyear2.
if (tyear3 ne fyear3) y3=tyear3.
if (tyear4 ne fyear4) y4=tyear4.
if (tyear5 ne fyear5) y5=tyear5.
if (tyear6 ne fyear6) y6=tyear6.
if (tyear7 ne fyear7) y7=tyear7.
if (tyear8 ne fyear8) m8=tyear8.
if (tmonth2 eq fmonth2) m2=tmonth2.
if (tmonth3 eq fmonth3) m3=tmonth3.
if (tmonth4 eq fmonth4) m4=tmonth4.
if (tmonth5 eq fmonth5) m5=tmonth5.
if (tmonth6 eq fmonth6) m6=tmonth6.
if (tmonth7 eq fmonth7) m7=tmonth7.
if (tmonth8 eq fmonth8) m8=tmonth8.
if (tyear2 eq fyear2) y2=tyear2.
if (tyear3 eq fyear3) y3=tyear3.
if (tyear4 eq fyear4) y4=tyear4.
if (tyear5 eq fyear5) y5=tyear5.
if (tyear6 eq fyear6) y6=tyear6.
if (tyear7 eq fyear7) y7=tyear7.
if (tyear8 eq fyear8) y8=tyear8.
compute gap1=0.
compute gap2=0.
compute gap3=0.
compute gap4=0.
compute gap5=0.
compute gap6=0.
compute gap7=0.
compute gap1=((y2 - y1) * 12) + (m2 - m1).
compute gap2=((y3 - y2) * 12) + (m3 - m2).
compute gap3=((y4 - y3) * 12) + (m4 - m3).
compute gap4=((y5 - y4) * 12) + (m5 - m4).
compute gap5=((y6 - y5) * 12) + (m6 - m5).
compute gap6=((y7 - y6) * 12) + (m7 - m6).
compute gap7=((y8 - y7) * 12) + (m8 - m7).
recode gap1 to gap7 (lo thru -1,49 thru hi=0).
compute totuse=gap1+gap2+gap3+gap4+gap5+gap6+gap7.
recode gap1 gap2 gap3 gap4 gap5 gap6 gap7
(1 thru 6=1) (7 thru 12=2) (13 thru 18=3)
(19 thru 24=4) (25 thru 30=5) (31 thru 36=6)
(37 thru 42=7) (43 thru 48=8).

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Appendix 4: Instructions for converting a Multimate document into
a form SPSSPC can use

Converting an MM document to ASCII mode for use in SPSS.

- I. Assume the data to be used is in a DBase3 file.
 - a. convert the DBase file to a standard data file (SDF).
(Use the Dbase manual for exanct instructions.)
 - b. transfer the SDF file to SPSS:
copy \dbase\file.sdf \sps\file.dat

- II. Create an SPSS program in Multimate (MM).
 - a. set the document format to have left margin=0,
right margin=80, page length=66, no automatic page
breaks.
 - b. put a manual return at the end of each line. Limit
each line to 40 characters.

- III. To convert the MM document to an SPSS usable file type
"UTIL" (in the MM directory).
 - a. select "File Conversion" and go to the "Edit Conversion
defaults". Select no,no,cr/lf,formfeed,yes,yes.
 - b. go to "file conversion":

source document	destination document
file.doc	newfile.doc
mm	ascii

- IV. Copy newfile.doc to spss
copy \mm\newfile.doc \spss\newfile.sps

- V. Run SPSS using the include command
include 'newfile.sps'.

- VI. After correcting or changing the SPSS program in MM, the
conversion process must be done every time. Before converting,
delete "newfile.doc" as the conversion won't work if the
destination document already exists.

- V.. The conversion process will not work on a document longer
than 160 lines.