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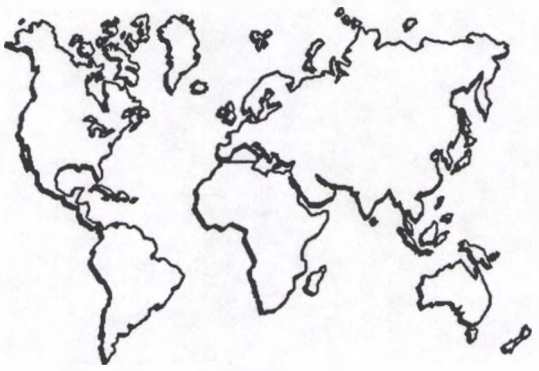

FAMILY PLANNING AND SOCIO-ECONOMIC STATUS OF HMO MEMBERS IN NORTHEAST BRAZIL

by

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MACEIO UNIMED BASELINE

PRELIMINARY REPORT OF DATA ANALYSIS

INTRODUCTION

The principal purpose of the baseline study is to provide UNIMED/Maceio with appropriate data on which to build the PROFIT/UNIMED venture in Family Planning. A review of the Demographic and Health Survey (DHS, 1991) data for the Northeast of Brazil revealed that the level of disaggregation was too high to infer baseline information for program planning, management and evaluation. In addition, the UNIMED population may be considered distinct from the general population in the Northeast and the state of Alagoas in that all enrollees are employed, in union with employed persons or individual subscribers, and thus probably present a distinct demographic profile from the rest of the population, especially with respect to education, income and use of mass media.

The data consist of 369 valid questionnaires of 80 items[1] collected during the period 24 November through 7 December, 1993. Data were collected under the direction of the PROFIT Project, in coordination with the UNIMED Project Director, Dr. MacDowell. Direct supervision of field data collection and data entry was done by Rosa Said, under contract to the PROFIT Project.

Data Analysis was conducted in Washington, D.C. jointly by Dr. Timothy Farrell (Director of Evaluation) and Dra. Fernanda Kaplan (Family Planning Advisor), both of the PROFIT Project.

SAMPLING

A sample size of 370 respondents from the current UNIMED rolls was selected. The sample size was calculated using a formula for binomial data, with a population size of 11,000 (UNIMED enrollment), a proportion of .5 (equal likelihood of contraceptive use and non-use), a conservative permissible sampling error of .05, and confidence interval of .95. This produces a sample size of 371.

Since UNIMED has a list of all subscribers, a sampling interval of 29.7 (30) was used to enter the list and generate a list of 370 potential respondents. A second pass was made to obtain an additional 60 alternates. Two assumptions were made: First, that the majority of those women (age 15-49) would be subscribers through employer group insurance plans; and, Second, that a majority would be available for interview at the work place. Neither of these assumptions proved to be correct. As will be noted in the analysis, 82% proved to be individual subscribers, and the majority of interviews thus had to be conducted in the home through an appointment procedure. This increased the cost of the baseline significantly.

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[1] See Appendix A, for a sample copy of the interview schedule.

Of the 370 interviews completed, only 1 contained data that were sufficiently inconsistent to be deleted from the working files.

DATA PREPARATION AND CLEANING

Data were sent to PROFIT Headquarters in Washington in two forms: electronic and paper. A data entry program, with error checking capability, was designed for the survey. Data were checked and entered in Maceio as protocols were turned in by the supervisors. In addition, the original protocols were also sent to PROFIT in order to provide a second check on coding accuracy.

Preliminary scanning of the data was done using NCSS (Number Cruncher Statistical System)[2]. Several anomalies were noted, which when cross checked against the original data, were due to coding errors. Fortunately, nearly all errors were consistent which facilitated their correction in the subsequent analyses. SPSS[3] was used to correct the coding errors and to conduct the final analyses.

The majority of the coding errors were due to the "hard coded" data entry template that was created at PROFIT Headquarters. Because the authors of the questionnaire were not on-site to conduct the pre-test and determine the adequacy of the codes, on-site supervisors had to make decisions on how some items were to be coded, working within the limits of the hard-coding procedures. As noted, these decisions were generally consistent, thus permitting rather facile correction measures.

DESCRIPTION OF THE SAMPLE POPULATION: GENERAL CHARACTERISTICS

The sample consists of 369 women of child bearing age (15-49). A surprisingly large number (303 or 82%) were found to be individual subscribers, meaning that they participate in UNIMED on an independent basis rather than through employer group insurance (66 or 18%). At present it is not clear whether this difference is simply an artifact of the sample or if there is some inherent bias built in to the way individual records are stored in the UNIMED data base.

In terms of general basic demographics, the sample is virtually entirely urban (99%), has a mean age of 33.5 years, household size of 3.95, and mean education of 13 years. Eighty-five percent claim to be currently employed, with the majority (30.4%) indicating that they were employed in some professional capacity. Only 1.6% indicated they were unemployed, and 13.8% indicated that they were housewives. Only 14 households (3.8%) indicated that

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[2] NCSS is a complete statistical analysis package copyright to Dr. Jerry L. Hintze, Kaysville, Utah, 84307.

[3] Statistical Package for the Social Sciences, copyright SPSS, Inc., Chicago, Illinois.

no one in the household was currently employed. Of the 369 women sampled, 301 or 82% were the "owners" of the policy.

Eighty-three percent said they lived in a home that either they (or their parents) owned; all had electricity and running water in the home, 99.5% had both a radio and television in their home, and 78% had telephones.

No direct questions regarding income were asked. Nevertheless two indicators support the notion that this is principally a middle- or upper-middle class population. There were an average of 1.8 persons per household employed on a regular basis, and 72% of the households earned the equivalent of 6 or more minimum salaries per month. A more dramatic indication of this is found in the following frequency tabulation:

Number of monthly minimum salaries per household

1 - 2	21 (5.7%)
3 - 5	82 (22.3%)
6 - 10	113 (30.6%)
10 plus	151 (40.9%)

For other socio-economic dimensions, comparison with the DHS data for the Northeast is dramatic. While data in the DHS[4] are not disaggregated to the urban/rural level for each state, and therefore is not directly comparable with this sample, some instructive observations can be noted in Table 1.

TABLE 1

Some Comparisons between Urban Northeast and UNIMED Samples

Variable	DHS[5]	UNIMED
Television in home	68.9%	99.5%
Water in home	76.7%	100%
Electricity in home	94.5%	100%
Read newspaper at least 1/week	44.5%	85.6%

[4] Pesquisa sobre Saude Familiar no Nordeste Brasil 1991. DHS.

[5] Refers to all urban areas in DHS Northeast, not to any specific state or city.

Because there was such a high proportion of individual vs. group subscribers it is useful to compare the two groups along dimensions or variables where they might be hypothetically expected to differ, particularly socio-economic dimensions. These comparisons are summarized in Table 2.

TABLE 2

Comparisons between Individual and Group Subscribers

Variable	Group Subscriber -Mean	Individual Subscriber - Mean	t-Test	Significance Level
Total Living in reference household	4.35	3.86	2.58	.01
Respondent Age	35.27	33.08	2.04	.04
Respondent Educ - Years Completed	11.58	13.32	-3.42	.001
Spouse Education	12.73	12.76	-.07	NS
Total Employed in household	1.6	1.8	-2.18	.03
Percent making more than 10 minimum salaries/month	71.2	71.6		
House owned by reference family (%)	83.3%	82.9%		
Telephone in house %	80.3%	77.9%		
Percent of respondents defining themselves as Professional	22.7%	32.7%		

While there are some statistical differences between the two groups, they are not consistent, and do not suggest a pattern of difference between them. The mean age of education of the individual group is significantly higher and corresponds with their self-definition of "Professional". On the other hand, behavioral expressions of economic status do not differ between the groups (homeownership, number of minimum salaries per month or possession of a telephone). As noted earlier, 99% are urban households, and all have running water and electricity as well as radios and television sets.

DESCRIPTION OF THE SAMPLE POPULATION: FAMILY PLANNING KNOWLEDGE AND BEHAVIOR

Virtually all (99.2%) women in the sample know "something" about family planning methods; 75.3% say that they have used at least one method, and 56.6% indicated that they were using a method at the time of the interview. Table 3 expresses which methods the women indicated knowing about when asked to spontaneously name methods they knew and which methods they had used in the past and were currently using. The last column is from the Northeast Brazil DHS and reports urban findings only.

TABLE 3

Knowledge and Use of Contraceptive Methods

METHOD	KNOW OF METHOD	EVER USED METHOD	CURRENT METHOD USED	DHS BRAZIL NORTHEAST '91 URBAN
Any Traditional Method including "natural"	76.2%	13.0%	9.5%	5.6%
Oral Contraceptive	97.0%	17.6%	8.1%	13.7%
Condoms	77.2%	8.9%	6.0%	1.5%
Diaphragms	27.4%	0.5%	0.0%	0.1%
Spermicides (all)	13.3%	0.0%	0.0%	0.1%
Injectables (all)	22.0%	1.1%	0.5%	1.1%
IUDs	65.0%	1.9%	1.1%	0.5%
Implants	3.0%	0.5%	0.0%	NA
Female Sterilization	36.6%	30.4%	30.6%	42.9%
Male Sterilization	11.1%	1.4%	1.9%	0.1%

It should be noted that "ever used method" is not a time-bound measure. It only means that in some point in a woman's reproductive life she has used one (or more) of the methods mentioned.

DIFFERENCES BETWEEN "GROUP MEMBERS" AND "INDIVIDUAL SUBSCRIBERS"

Table 4 compares and contrasts "group members" with "individual subscribers" by method currently used. All figures are percentages.

TABLE 4

Comparison Between Group Members, Individual Members and Total Sample

Method Now Used	Total Sample	Group Members	Individual Sub.
Any Traditional	9.5%	13.6%	8.6%
Oral Contraceptive	8.1%	4.5%	8.9%
Condom	6.0%	4.5%	6.3%
Diaphragm	0	0	0
Spermicides	0	0	0
Injections	0.5%	0	0.7%
IUD	1.1%	0	1.3%
Implant	0	0	0
Fem. Sterilization	30.6%	57.6%	25.1%
Male Sterilization	1.9%	6.1%	1.0%

MEDIA UTILIZATION

The sample was asked to provide information on three main types of mass media use: radio, television and various print media. Table 5 compares the two groups along the most common dimensions.

TABLE 5

Mass Media Communication

MEDIA VARIABLES MEASURED	GROUP MEMBERS	INDIVIDUAL SUBSCRIBERS
RADIO PATTERNS		
Radio listening frequency 2 or more days per week	56.1%	64.4%
Listens to Music Programs Regularly	74.2%	76.2%
Listens to News Programs Regularly	47.0%	37.0%
Listens mostly early a.m – 12:00	86.8%	49.8%
TELEVISION PATTERNS		
Watch TV on a daily basis	83.3%	78.2%
Watches Telenovelas (Soap Opera)	83.3%	78.2%
Watches Interview/Talk Shows	34.8%	36.0%
Watches News	84.8%	85.5%
Watches Sports	15.2%	9.2%
Watches Variety Shows	62.1%	60.1%
PRINCIPAL PRINT MEDIA		
Never/Rarely Reads Newspaper	63.2%	67.7%
Reads Newspaper almost Daily	36.3%	32.3%
Reads Fashion Magazines Regularly	45.5%	47.5%
Reads Newsmagazines	63.6%	64.4%

There is very little difference between the two groups with respect to media use. The main difference seems to be in listening time for the radio in the early morning. From these data

it is reasonable to plan a mass media campaign for radio and television audiences particularly around news, soap opera and variety shows. Local newspapers may not be the most efficient way of reaching the audience, with only about 36% of the sample indicating that they read a newspaper on a regular or daily basis.

FERTILITY HISTORY AND FAMILY SIZE

Table 6 summarizes the fertility history and goals of the sample. In general terms, both the "group members" and the "individual subscribers" have about the same goals for family size, median 2 children. While "group members" have had more pregnancies and births, this can be largely attributed to the fact that they are generally older (Table 3), and are more often "in union" than the "individual subscribers". The sample from this population reveals a very low infant/child mortality rate, as inferred from the number of live births and the number of children alive at the time of the survey (1.3 born alive; 1.26 alive at time of survey).

FERTILITY HISTORY

Table 6

Variable	TOTAL	GROUP	INDIV.	t-TEST SIG LEVEL
No. Pregnancies (mean)	1.68	2.53	1.5	.04
No. Pregnancies (median)	2.0	2.5	1	NA
Never Pregnant - Percent	31.2%	4.5%	37.0%	NA
No. Live Births (mean)	1.3	2.1	1.15	.02
Live Births (median)	1	2	1	NA
No. Chi Alive (mean)	1.26	2.0	1.09	.006
Total Number of Children Wanted (mean)	2.1	2.56	1.9	NS
Total Number of Children Wanted (median)	2	2	2	NA

Table 6 describes reported fertility history for the total sample and the two groups. Individual subscribers have slightly significantly fewer pregnancies than group subscribers (.04), and a far larger percentage of "never pregnant" (37% vs 4.5%) responses. The

number of live births between the two groups is significant at the .02 level as is the number of living children (.006).

Fertility history in this case seems to be principally a function of age. This is reflected when one reviews the responses to "Total Number of Children Wanted" in each group. T-Test results are not significant, and the median responses "2" is the same for both groups.

Table 7 is a construct to estimate ideal family size. Basically it indicates that of the total sample about 44% have achieved their desired family size, while only about 3.5% have more children than their stated goal.

TABLE 7

"IDEAL" FAMILY SIZE

VALUE/MEANING	TOTAL	GROUP	INDIVIDUAL
-1/MORE THAN WANTED	13 (3.5)	4 (6.1)	9 (3.0)
0/IDEAL REACHED	164 (44.4)	34 (51.5)	130 (42.9)
+1/MORE WANTED	118 (49.1)	26 (39.4)	155 (51.2))

This variable was created by subtracting the current number of living children from the total number wanted which could result in a negative number if a woman had more children alive than she said she wanted; a zero if she had the same as she wanted; or, a positive if she had less than she wanted. To simplify all numbers to the left of 0 were set equal to -1 and those to the right set to +1.

Table 8 provides a cross tabulation of the calculated "ideal" family size by civil status (in or not in stable union).

TABLE 8

"IDEAL" FAMILY SIZE BY CIVIL STATUS (UNION)

Variables	NOT IN UNION	IN UNION	ROW TOTALS
HAVE MORE CHILDREN THAN DESIRED	Count: 4 Row %: 30.8 Col%: 3.1	Count: 9 Row %: 69.2 Col%: 4.1	Count: 13 Row %: 3.7 Col%:
HAS NUMBER OF CHILDREN WANTED	Count: 56 Row %: 34.6 Col%: 43.8	Count: 106 Row %: 65.4 Col%: 47.7	Count: 162 Row %: 46.3 Col%:
WANTS AT LEAST ONE MORE CHILD	Count: 68 Row %: 38.9 Col%: 53.1	Count: 107 Row %: 61.1 Col%: 48.2	Count: 175 Row %: 50.0 Col%:
COLUMN TOTALS	128 36.6	222 63.4	350

Missing observation: 19
Chi Square: 86 Sig. .64 (not significant)

There is no significant difference between "Ideal" family size and civil status (union), although the tendency is in the direction of women in union desiring more children (61.1%) vs 38.9%).

As highlighted (shaded) in the table, there appears to be a very low percentage of undesired births (3.7%)

Table 9 contemplates the "time horizon" for when the respondents' want to have another child, or whether they want another child at all. This cross tabulation is by civil status

(union), and indicates clearly that the women in this sample have a reasonable understanding of their family goals and their ability to control these.

TABLE 9

TIME HORIZON FOR NEXT CHILD BY CIVIL STATUS (UNION)

Variables	NOT CURRENTLY IN UNION	CURRENTLY IN UNION	ROW TOTALS
NO MORE CHILDREN WANTED	Count: 64 Row %: 29.6 Col%: 51.2	Count: 152 Row %: 70.4 Col%: 66.4	Count: 216 Row %: 61.0 Col%:
WITHIN 12 MONTHS	Count: 3 Row %: 9.7 Col%: 2.4	Count: 28 Row %: 90.3 Col%: 12.2	Count: 31 Row %: 8.8 Col%:
13 - 24 MONTHS	Count: 7 Row %: 30.4 Col%: 5.6	Count: 16 Row %: 69.6 Col%: 14.4	Count: 23 Row %: 6.5 Col%:
25+ MONTHS	Count: 51 Row %: 60.7 Col%: 40.8	Count: 33 Row %: 39.3 Col%: 14.4	Count: 84 Row %: 23.7 Col%:
COLUMN TOTALS	125 35.3	229 64.7	354

Missing observations: 15
Chi Square 35.94 Sig .000

This Table is highly revealing. First, it clearly separates those wishing to limit family size from those desiring to space their children (shaded area). Second, it shows that those women not in union who wish to space, have a 2 year plus time horizon for when they want to have a (next) child. Women in union, on the other hand, show no similar time horizon, with 12%, 14% and 14% wanting children at 1, 2, and 2 plus years.

CONTRACEPTIVE BEHAVIOR

As noted in the introduction, nearly all women (99%) in the sample have some knowledge of contraceptive methods. As can be seen in Table 10, nearly 76% of the entire sample have used some form of contraception during their life times.

TABLE 10

EVER USED CONTRACEPTIVE METHOD BY TYPE SUBSCRIBER

Variables	GROUP MEMBER	INDIVIDUAL SUBSCRIBER	ROW TOTALS
HAVE NEVER USED ANY CONTRACEPTIVE	Count: 7 Row %: 7.9 Col%: 10.6	Count: 82 Row %: 92.1 Col%: 27.1	Count: 89 Row %: 24.1 Col%:
HAVE USED AT LEAST ONE CONTRACEPTIVE METHOD	Count: 59 Row %: 21.1 Col%: 89.4	Count: 22.1 Row %: 78.9 Col%: 72.9	Count: 280 Row %: 75.9 Col%:

Chi Square 8.01 DF 1 sig .000

Group members are more likely to have ever used some form of contraceptive than individual subscribers. In addition, as noted in Table 3, group members are significantly older than individual subscribers, and are more likely to be living in stable union, as noted in Table 11.

TABLE 11

CROSS TABULATION OF CIVIL STATUS (UNION) BY TYPE OF SUBSCRIBER

Variables	NOT IN UNION	IN UNION
GROUP MEMBERSHIP	Count: 3 Row %: 4.5 Col%: 2.3	Count: 63 Row %: 95.5 Col%: 27.2
INDIVIDUAL SUBSCRIPTION	Count: 126 Row %: 42.7 Col%: 97.7	Count: 169 Row %: 57.3 Col%: 72.8

Chi Square 34.2 DF 1 Sig 000

Tables 12 and 13 indicate that "group members" have a much higher level (81.8%) of contraceptive behavior than "individual subscribers" (51.5%). This finding is highly statistically significant, and is at least partially explained by the greater number of "group members" being found in stable unions, having "completed" families and age.

TABLE 12

CURRENT CONTRACEPTIVE USE BY TYPE UNIMED SUBSCRIPTION

Variables	GROUP MEMBER	INDIVIDUAL SUBSCRIBER	ROW TOTALS
NOT USING ANY CONTRACEPTIVE	Count: 12 Row %: 7.5 Col%: 18.4	Count: 147 Row %: 92.5 Col%: 48.5	Count: 159 Row %: 43.1 Col%:
USING SOME KIND OF CONTRACEPTIVE	Count: 54 Row %: 25.7 Col%: 81.8	Count: 156 Row %: 74.3 Col%: 51.5	Count: 210 Row %: 56.9 Col%:

Chi Square 20.33 DF 1 .000001

TABLE 13

CURRENT CONTRACEPTIVE USE BY CIVIL STATUS (UNION)

Variables	NOT IN UNION	IN UNION
NOT USING ANY CONTRACEPTIVE	Count: 94 Row %: 61.4 Col%: 26.0	Count: 59 Row %: 38.6 Col%: 25.4

Variables	NOT IN UNION	IN UNION
USING SOME KIND OF CONTRACEPTIVE	Count: 35 Row %: 16.8 Col%: 27.1	Count: 173 Row %: 83.2 Col%: 74.6

Chi Square 76.39 DF 1 Sig 000

Women in union are significantly more likely users of some contraceptive device.

CONTRACEPTIVE METHOD MIX

As can be appreciated in Table 14, method mix in the sample is poor. Sterilization is far and away the most common method used by both group members and individuals. Tables 15 through 18 examine the sterilization issue more closely.

TABLE 14

METHOD MIX BY CIVIL STATUS (UNION)

METHOD	NOT IN UNION	IN UNION	TOTAL
FEMALE STERILIZATION	11 (31.4)	102 (57.6)	113 (53.3)
TRADITIONAL/NATURAL	6 (17.1)	28 (15.8)	34 (16.4)
ORAL CONTRACEPTIVE	5 (14.3)	25 (14.1)	30 (14.2)
CONDOM	10 (28.6)	12 (6.8)	22 (10.4)
MALE STERILIZATION	0	7 (3.9)	7 (3.3)
IUD	2 (5.7)	2 (1.1)	4 (1.8)
INJECTIONS	1 (2.9)	1 (0.56)	2 (0.9)
DIAPHRAGM	0	0	0
IMPLANT	0	0	0
SPERMICIDE	0	0	0

Female sterilization is by far the most common contraceptive method in the sample, and leads in both married (in union) and not married (not in union) groups. Closely grouped are traditional/natural methods with oral contraceptives and condoms. Not surprisingly the prevalence of condom is considerably higher in the not-in-union group, and male sterilization only in the in-union group. Use of the IUD, and spacing methods in general, is remarkably low overall.

When female sterilization is further reviewed (table 15, 16, 17 and 18), it becomes clear that use of this method is largely by women in union, ascends linearly by age, is more likely to be found among "Group Member" subscribers, and tends to occur after the second or third child is born and lives.

These findings indicate that, in this sample, women who use sterilization, understand the method, and use it according to their goals. It will be recalled that the median number of desired children is two, and 46% of the sterilizations occur after the second birth and 43.4% after the third. The fact that two children is the "ideal" family size, but 15% of the entire sample (43% of those sterilized) have three children, argues strongly for greater access to emphasis on spacing methods.

Table 15 is a cross tabulation of sterilized and not sterilized women according to civil status. It is clear that sterilization occurs much more frequently among women in union.

TABLE 15

FEMALE STERILIZATION BY CIVIL STATUS (UNION)

Variables	NOT STERILIZED	STERILIZED
NOT IN UNION	Count: 118 Row %: 91.5 Col%: 47.6	Count: 11 Row %: 8.5 Col%: 9.7
IN UNION	Count: 130 Row %: 56 Col%: 52.4	Count: 102 Row %: 44.0 Col%: 90.3

Variables	NOT STERILIZED	STERILIZED
COLUMN TOTALS	Count: 248 Row %: 68.7 Col%:	Count: 113 Row %: 31.3 Col%:

Missing observations: 8

Chi Square 48.41 DF 1 sig .000

Table 16 examines sterilization behavior by age groups. It is clear, as highlighted in the shaded boxes, that women in this sample opt for sterilization somewhere after age 26, and that sterilization numbers increase in a linear fashion from that age onwards.

TABLE 16

STERILIZATION BY AGE GROUP

Variables	NOT STERILIZED	STERILIZED	ROW TOTAL
15 - 20 YEARS	Count: 15 Row %: 100 Col%: 5.9	Count: 0 Row %: Col%:	Count: 15 Row %: 4.1 Col%:
21 - 25 YEARS	Count: 48 Row %: 94.1 Col%: 18.8	Count: 3 Row %: 5.9 Col%: 2.6	Count: 51 Row %: 13.8 Col%:

Variables	NOT STERILIZED	STERILIZED	ROW TOTAL
26 - 30 YEARS	Count: 69 Row %: 86.3 Col%: 27.1	Count: 11 Row %: 13.8 Col%: 9.6	Count: 80 Row %: 21.7 Col%:
31 - 35 YEARS	Count: 52 Row %: 67.5 Col%: 20.4	Count: 25 Row %: 32.5 Col%: 21.9	Count: 77 Row %: 20.9 Col%:
36 - 40 YEARS	Count: 34 Row %: 52.3 Col% 13.3	Count: 31 Row %: 47.7 Col%: 27.2	Count: 65 Row %: 17.6 Col%:
41 - 49 YEARS	Count: 37 Row %: 45.7 Col%: 14.5	Count: 44 Row %: 54.3 Col%: 38.6	Count: 81 Row %: 22.0 Col%:
COLUMN TOTAL	225 69.1	114 30.9	369 100

Chi Square 62.16 DF 5 sig .000

As can be seen in Table 17, sterilization rarely occurs (1 case) before the woman has at least two children. As noted above, if the desired or "ideal" family size is two, the fact that 43% of women are sterilized after the third living child, efforts need to be directed towards spacing methods.

TABLE 17

FEMALE STERILIZATION BY NUMBER OF LIVING CHILDREN

NUMBER OF CHILDREN	NOT STERILIZED	STERILIZED	
NONE	Count: 146 Row %: 100 Col%: 57.5	Count: 0 Row %: Col%:	Count: 146 Row %: 39.8
ONE	Count: 69 Row %: 98.6 Col%: 27.2	Count: 1 Row %: 1.4 Col%: .9	Count: Row %: Col%:
TWO	Count: 30 Row %: 36.6 Col%: 11.8	Count: 52 Row %: 63.4 Col%: 46.0	Count: 70 Row %: 19.1
THREE	Count: 6 Row %: 10.9 Col%: 2.4	Count: 49 Row %: 89.1 Col%: 43.4	Count: 82 Row %: 22.3
FOUR	Count: 1 Row %: 20.0 Col%: .4	Count: 4 Row %: 80 Col%: 3.5	Count: 55 Row %: 15.0
FIVE	Count: 2 Row %: 22.2 Col%: .8	Count: 7 Row %: 77.8 Col%: 6.2	Count: 9 Row %: 2.5

Chi-square = 236.96 df = 5 sig. .0000

Table 18 examines the relationship between sterilization and type of subscriber. As might be surmised, "group members" are proportionately about twice as likely to be sterilized as "individual subscribers".

General Analysis of Sterilization Behavior

The data from this sample clearly indicate that sterilization is not an indiscriminate contraceptive method. The data clearly indicate that it is a decision reached, mostly by women in union, who have achieved their desired family size and who are generally 30 years old and above.

Similarly, due to the very poor method mix among the rest of the sample of this population, it is clear that much more emphasis needs to be placed on providing both information and services for spacing methods such as injections, oral contraceptives and IUDs. This is especially true for the younger and not-in-union women in the sample.

SOURCE OF CONTRACEPTIVE METHODS

Table 19 describes the source of contraceptive methods for the women in this sample. As will be noted, private physicians currently serve the greatest number of women (22.8%). This is undoubtedly due to the large number of sterilizations. It would seem appropriate for UNIMED to capture a larger share of this market, especially for methods of high re-supply in light of the addition of family planning and maternal and child health to its policy. It might also be asked if respondents discriminated between "private" and "UNIMED" physicians since family planning was not previously covered by UNIMED. There is no way of determining this based on the data available.

TABLE 19

WHERE OBTAIN CONTRACEPTIVE METHOD

SOURCE/RESPONSE	TOTAL	GROUP	INDIVIDUAL
PHARMACY	39 (18.7)	5 (9.2)	34 (22.0)
PRIVATE MD	84 (40.3)	22 (40.7)	62 (40.2)
UNIMED MD	23 (11.0)	8 (14.8)	15 (9.7)
PUBLIC HEALTH	29 (13.9)	11 (20.3)	18 (11.7)
OTHER (TRAD METH)	33 (15.8)	8 (14.8)	25 (16.2)

DISCONTINUATION

Table 20 provides some basic reasons for discontinuation of the last contraceptive used. Unfortunately these are very global responses since the questionnaire was not designed to elicit very specific responses. Thus the relatively undifferentiated item "Medical Reasons" encompasses a variety of responses ranging from surgery (hysterectomy) to high blood pressure, none of which can be validated. Nevertheless they are instructive in that one can infer that at any point in time, it can be expected that about six percent of the sample will discontinue family planning in order to have another child.

TABLE 20

WHY DISCONTINUED LAST CONTRACEPTIVE METHOD

REASON	TOTAL	GROUP MEMBER	INDIVIDUAL SUBSCRIBER
CONTINUE TO USE	212 (57.5)	55 (83.3)	157 (51.8)
WANT ANOTHER CHILD	25 (6.8)	3 (4.5)	22 (7.3)
MEDICAL REASONS	39 (10.6)	1 (1.5)	38 (12.6)
NEVER USED	91 (24.7)	7 (10.6)	84 (27.7)

UNIMED USE AND SATISFACTION

Tables 21 through 23 present basic measures of experience and satisfaction with UNIMED services by the women in the sample. As can be seen in Table 21, 50% of the entire sample have used UNIMED services five or more times over the past 12 months preceding the interview. There is no difference between "group members" and "individual subscribers", indicating that both types of subscribers make about the same use of the services.

TABLE 21

FREQUENCY OF UNIMED USE IN LAST 12 MONTHS BY TYPE OF SUBSCRIBER

Variables	GROUP MEMBER	INDIVIDUAL SUBSCRIBER	ROW TOTALS
NONE	Count: 4 Row %: 12.9 Col%: 6.1	Count: 27 Row %: 87.1 Col%: 8.9	Count: 31 Row %: 8.4 Col%:
1 -2 TIMES	Count: 14 Row %: 17.9 Col%: 21.2	Count: 64 Row %: 82.1 Col%: 21.1	Count: 78 Row %: 21.1 Col%: 21.1
3 - 5 TIMES	Count: 15 Row %: 20.0 Col%: 22.7	Count: 60 Row %: 80.0 Col%: 19.8	Count: 75 Row %: 20.3 Col%:
MORE THAN 5 TIMES	Count: 33 Row %: 17.6 Col%: 50.0	Count: 152 Row %: 82.2 Col%: 50.2	Count: 185 Row %: 50.1 Col%:

Chi Square .75 DF 3 sig .86 (NS)

Table 22 presents data regarding respondents' "satisfaction" with the services provided through UNIMED. Ninety (90.5%) indicated that they were satisfied with the services received though the program.

TABLE 22

SATISFACTION WITH UNIMED SERVICES BY TYPE OF SUBSCRIBER

Variables	NO	DON'T KNOW	YES
GROUP MEMBER	Count: 2 Row %: 3.0 Col%: 15.4	Count: 2 Row %: 3.0 Col%: 9.1	Count: 62 Row %: 94.0 Col%: 18.6
INDIVIDUAL SUBSCRIBER	Count: 11 Row %: 3.6 Col%: 84.6	Count: 20 Row %: 6.6 Col%: 90.9	Count: 271 Row %: 89.7 Col%: 81.4
COLUMN TOTAL	Count: 13 Row %: Col%: 3.5	Count: 22 Row %: Col%: 6.0	Count: 333 Row %: Col%: 90.5

Chi Square 1.33 DF 2 sig .51 (NS)

This overwhelmingly positive response is mirrored in Table 23, in which 95% of the respondents indicated that they would recommend UNIMED to others.

TABLE 23

RECOMMEND UNIMED TO OTHERS BY TYPE OF SUBSCRIBER

Variables	GROUP MEMBER	INDIVIDUAL SUBSCRIBER
NO	Count: 1 Row %: 9.1 Col%: 1.5	Count: 10 Row %: 90.9 Col%: 3.3
DON'T KNOW	Count: 0 Row %: Col%:	Count: 5 Row %: 100 Col%: 1.7
YES	Count: 65 Row %: 18.4 Col%: 98.5	Count: 288 Row %: 81.6 Col%: 95.0

Chi Square 1.7 DF 2 sig .41 (NS)

As will be noted, this response does not vary by type of subscriber, which means that the services received are perceived uniformly as being satisfactory or better.

DISCUSSION

In general, the sample reflects a population which is highly educated and economically secure. While there are differences between "group members" and "individual subscribers, these are generally not statistically significant. Where they are statistically significant (particularly in age and civil status), the differences explain different patterns in contraceptive behavior.

The population inferred from the sample can therefore be described as being well-informed regarding contraception, in that virtually all know something about family planning, and 75% have used at least one method during their life. The women in the sample appear to be highly aware of their family size goals and the means to achieve these. This is highlighted by the fact that only about 3.5% of the women in the sample have more children than they state that they desire.

Strong evidence suggests that among this population at least, female sterilization is a conscious and voluntary decision based on age, civil status and having reached ideal family size.

Based on the data regarding method mix, it is clear that more use needs to be made of spacing methods: IUDs, injectables, and oral contraceptives. Implants may be a viable vehicle, especially for the higher end of the economic continuum. The relatively high reliance on traditional and "natural" methods by women who indicate that they want to "space" their children, could be replaced by more effective spacing methods.

UNIMED enjoys a population which expresses a high degree of satisfaction with the services offered in the past. Consequently, it would seem that the marketing task of UNIMED should be relatively straightforward, i.e. present information regarding the new products and establishing a first class delivery system. Because of the high degree of access to radio and television, and to a lesser degree of print media, UNIMED has the luxury of working with several communications channels to achieve its goals and objectives with respect to family planning and maternal and child health.

One of the striking findings from this baseline is the very high educational and economic levels of the sample, and hence the population. UNIMED may wish to investigate the possibility of incorporating more lower socio-economic individuals and companies into its program. As currently constituted the profile of this sample, the population appears to be one of middle- to upper-middle class. While this provides a stable base for UNIMED, it does not necessarily address the contraceptive needs of the less well-off elements of the area, as reflected in the DHS. UNIMED might consider targeting more "floor workers" in the companies with which it contracts in order to increase access to an use of family planning and maternal and child health services.

SPECIFIC RECOMMENDATIONS

More specific recommendations are made in a separate report by Dra. Fernanda Kaplan.