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FERTILITY DECLINE
IN THE DOMINICAN REPUBLIC:
PAST DETERMINANTS AND FUTURE PROSPECTS

by

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GLOSSARY

DHS	Demographic and Health Survey
CONAPOFA	Consejo Nacional de Poblacion y Familia (National Council on Population and Family)
EPA-83	Encuesta Nacional de Prevalencia en el Uso de Anticonceptivos (National Survey on the Prevalence of Contraceptive Use)
ENF-75	Encuesta Nacional de Fecundidad de la Republica Dominicana (National Survey on the Fecundity of the Dominican Republic)
ENF-80	Segunda Encuesta Nacional de Fecundidad, 1980 (Second National Survey on Fecundity)
EPAH-84	Encuesta Nacional de Prevalencia de Anticonceptivo Hombre (National Survey of the Prevalence of ??)
IEPD	Instituto de Estudio de Poblacion y Desarrollo (Institute for the Study of Population and Development)
PROFAMILIA	Asociacion Dominicana Pro-Bienestar de la Familia (Dominican Association for the Wellbeing of the Family)
SESPAS	Secretaria del Estado de Salud Publica y Asistencia Social (Federal Secretariat of Public Health and Social Assistance)
TFR	Total fertility rate
WFS	World Fertility Survey

EXECUTIVE SUMMARY

The four surveys of fertility and contraceptive prevalence that have been conducted in the Dominican Republic indicate that a sharp increase in contraceptive practice has taken place, and that it has resulted in a decline in the total fertility rate from about 7.1 in the late 1960s to about 4.1 in 1983. Not only has there been a sharp increase in the use of contraceptives, but also a dramatic shift in the mix of methods so that in 1983 female sterilization accounted for 60 percent of all contraceptive practice--a fraction that is very high by world standards.

There is every indication that this change in reproductive behavior was the result of a felt need on the part of Dominican men and women to limit their fertility. Similarly, the swing toward female sterilization as the method of choice seems to be the result of client preferences rather than of the priorities and policies of the national family planning program. Indeed, the preponderance of sterilizations as compared to the acceptance of other methods is now regarded as a situation that needs to be improved.

Fertility decline through fertility limitation has acquired considerable momentum in the Dominican Republic, and is likely to continue during the next five years. The principal thrust of this report is that the concern for increasing the use of methods other than sterilization should be translated into well thought out policies and initiatives with regard to birthspacing. There seems to be the opportunity to increase the quality as well as the quantity of contraceptive practice, leading to an improvement in the health of mothers and children together with further decline in age-specific fertility rates. Further analysis of existing survey data is needed for an adequate diagnosis of the current situation with respect to the interrelations among breastfeeding, contraception, the use of health services, child survival, and the length of birth intervals. On the basis of that analysis, targets should be set with respect to reducing the proportion of birth intervals shorter than three years, and increasing the prevalence and duration of breastfeeding. Progress on this front would seem to depend on increasing the acceptance of IUDs together with the quality of maternal and child health care, and there appears to be ample reason to favor an approach that involves the integration of family planning with other maternal and child health care services.

I. INTRODUCTION

1.1 The Population of the Dominican Republic

The population of the Dominican Republic was estimated to be about 6.4 million in 1985. Fertility has declined rapidly since the late 1960s. The decline has occurred in chronological association with the implementation of a national family planning program, has persisted through sharp fluctuations in economic activity, and has been well documented by a series of nationally representative sample surveys of fertility and contraceptive prevalence. The levels of mortality and international migration in the Dominican Republic are less well documented. Infant mortality, at about 70 per thousand live births, appears to be high relative to other Latin American countries at a similar stage in the demographic transition. Emigration to the United States, particularly to the New York metropolitan area, is believed to be large, but even rough estimates of the magnitude of current flows are hard to come by.

I.2 Scope of Work

The purpose of this consultancy was to review the fertility and contraceptive prevalence survey data collected in the Dominican Republic, and to provide an outsider's perspective on the research and programmatic activities taking place there. The results of four surveys were made available. They were Encuesta Nacional de Fecundidad de la Republica Dominicana undertaken in 1975 under the auspices of the World Fertility Survey (WFS) (ENF-75); the Segunda Encuesta Nacional de Fecundidad, 1980, also sponsored by the WFS (ENF-80); and the 1983-1984 Encuesta Nacional de Prevalencia en el Uso de Anticonceptivos (EPA-83) undertaken with support from Westinghouse Health Systems; and the 1984 Encuesta Nacional de Prevalencia de Anticonceptivo Hombre (EPAH-84) also supported by Westinghouse. All four surveys were carried out by the Consejo Nacional de Poblacion y Familia (CONAPOFA), the governmental body located in the Secretaria de Estado de Salud Publica y Asistencia Social (SESPAS) with responsibility for coordinating and implementing national population policy.

In addition to reviewing the published reports of the surveys, the consultant also had the opportunity to meet with a number of individuals who are, or who have been, responsible for or involved in demographic and operations research in the Dominican Republic. The names of the people who kindly took time out of their busy schedules to provide me with extremely

valuable insights are listed in Appendix 1. I am grateful to each of them for valuable insights.

In the course of the consultancy, it became evident that in addition to suggesting specific types of research activities and programmatic interventions on the basis of the survey results, it would also be useful to conduct a preliminary target-setting analysis in connection with the five-year Family Planning Project being developed by CONAPOFA, Asociacion Dominicana Pro-Bienestar de la Familia (PROFAMILIA), and the USAID mission. This was done with the help of the age-specific version of the TARGET program developed jointly by The Futures Group and The Population Council. Finally, a review was made of a number of questionnaires that had been developed for the Demographic and Health Surveys (DHS) project at Westinghouse Health Systems. The purpose was to recommend modifications that might be useful should there be a decision to implement a round of that survey in the Dominican Republic.

II. OBSERVATIONS AND FINDINGS

II.1 Fertility and Its Determinants: Results of the Surveys

II.1.1 Age-Specific Fertility Rates

Age-specific fertility rates have been calculated for different periods preceding the ENF surveys carried out in 1975 and 1980. The retrospective birth history data collected in both surveys show a remarkable amount of consistency, and uniformly indicate that fertility started to decline after 1965 from a very high level. The total fertility rate (TFR) in the mid-1960s was about 7.5. On the basis of the responses to the question on date of last live birth included in the EPA-83 survey, this appeared to have fallen to 4.1 in 1983. The rates for 1964-1966, 1973-1974, 1975-1979, and 1983 are shown in Table II.1-1. While these figures are subject to sampling errors and misreporting, there is every reason to believe that they provide a good indication of the actual trend in national fertility.

The surveys indicate that there are substantial differentials in fertility between rural and urban areas and according to the woman's educational attainment. The ENF-80 indicates that the total fertility rate among women with six or more years of education is about double that of women with two or fewer years of schooling. Similarly tabulations from all three surveys show that rural fertility is greater than urban fertility. In the EPA-83, for example, the TFR was 3.6 in urban areas as against 4.9 in rural areas. While the samples do not permit firm inferences regarding the extent to which these differentials have changed over time, it is clear that fertility has fallen within all educational groups and in both urban and rural areas. Indeed, in contrast with the experience of most other Latin American countries for which information is available, differentials appear to have narrowed during this stage of the fertility transition.

II.1.2 Nuptiality

Marriage patterns do not seem to have changed greatly since fertility began to decline. The two ENF surveys indicate that the mean age at first union for women is about 20 for women born after 1955, and that these women enter unions about a year later on average than women who were born before 1945. The proportion of all women age 15-49 in conjugal unions decreases slightly from 58 percent in the ENF-75, to 56 percent in the ENF-80, and is 55 percent in the EPA-83 sample. More women report themselves to be

in consensual unions than in legal marriages, with only about 38 percent of all women currently in union reporting themselves as married in each of the three surveys. There is a fair amount of marital instability: 38 percent of the unions reported to have been formed between five and nine years prior to the ENF-80 had been dissolved by the date of interview, mostly by separation. Women in the ENF-75 sample who reported their first union as having been formed at least 15 years before that survey had had an average of 1.6 unions. The net effect of marital dissolution and remarriage is that roughly fifteen percent of women above age 25 report themselves as being separated at the time of interview. Another 2 percent of these women are divorced, and about the same percentage are widowed.

While trends in age at first marriage and in marital dissolution do not appear to account for more than a small fraction of the observed change in fertility, they account for a much larger share of the differential between rural and urban fertility. In the EPA-83 sample 36 percent of women 20-24 are still single, while only 25 percent of rural women in this age group have not yet been married. Likewise a noticeably larger fraction of women over 25 find themselves separated in urban as compared to rural areas.

The EPAH-84 survey indicates that men marry about four years later than women. Men with more than one established sexual relationship appear to be relatively rare. Only 7.5 percent of men who were married or in a consensual union reported having an additional sexual relationship.

II.1.3 Breastfeeding

The fertility surveys provide a wealth of nationally representative information on breastfeeding. As in many other Latin American countries, a large proportion of women in the Dominican Republic breastfeed their children, but the average duration of breastfeeding is relatively short, at least in comparison with women in Asia and Africa. In all three samples, about 90 percent of women breastfeed their children. The two ENF surveys show a mean duration of breastfeeding of nine months, with no perceptible change in this variable occurring between 1975 and 1980. These surveys also show that more educated women consistently breastfeed less and terminate at shorter durations, and that urban women breastfeed less than rural women.

Tabulations of the EPA-83 data show that Dominican women tend to supplement at an early age, with 78 percent introducing a food other than breast milk during the first four months of their infant's life. About 60 percent of mothers gave their infants powdered milk. Apparently is a result of this pattern of early

supplementation, few women in the EPA-83 sample had prolonged post-partum amenorrhea. In the majority of cases, menstruation returned some time within three months of having given birth.

On the basis of the available tabulations, it does not seem likely that change in breastfeeding patterns has had a significant positive impact on fertility in the period since 1975. Whether the increase in contraceptive use, or the increase in the use of modern medical services, has a negative impact on breastfeeding is less clear.

II.1.4 Contraception

Without a doubt, the intermediate variable that accounts for the bulk of the decline in age-specific fertility rates since 1975 is use of contraception. Current use of contraception among all women in a conjugal union (casadas unidas) increased from 32 percent in the ENF-75 to 42 percent in the ENF-80, and reached 46 percent in the EPA-83 sample. The mix of methods used has changed over the years, but even in the EPA-75 sample 38 percent of all current users were women who had undergone surgical sterilization. In the EPA-83 sample, this proportion had reached 60 percent, an unusually high proportion by comparison with the past experience of both developing and developed societies. Table II.1-2 shows the method mix in 1975 and 1983.

Comparisons of the ENF-75 and ENF-80 samples reveal that between the surveys use increased in all socioeconomic groups, but especially among women with little education, or who lived in rural areas, or whose husbands earned their living in agriculture.

Knowledge of contraceptives, as measured by the surveys, has increased over the years, but was already quite high in 1975. Of the methods promoted by the national program, the IUD and the condom were the least known, with about 82 percent of all women recognizing the name of each of these methods in 1983. Only 41 and 30 percent, respectively, named the IUD and condom without prompting.

A relatively large proportion of pills, IUDs, and condoms--almost 70 percent in each case--are reported in the surveys to have been obtained from public sector outlets. The percentages are even higher in rural areas. The 1983 survey indicates, however, that only 40 percent of the sterilizations have been performed in the public sector.

There appears to be a significant amount of contraceptive use by persons who do not report themselves as being in a stable sexual union. The EPAH-84 show that 24 percent of all bachelors

use contraception as do 25 percent of all separated men. While a negligible proportion of single women in the EPA-83 sample report themselves as current users of contraception, 17 percent of divorced, separated or widowed women did.

II.1.5 Demand

A variety of information collected in the surveys indicates that men and women in the Dominican Republic no longer feel they can afford to have a large family. The potential demand for contraception is at least partially related to the proportion of women who say that they do not want to have any more children. Among women who were married or in a consensual union in the EPA-83 sample, 67 percent said they did not want to continue bearing children. This proportion varied greatly according to the number of surviving children, but hardly at all according to rural or urban residence. The question asked in the ENF surveys differed from the similar EPA questions in that it referred to the outcome of the current pregnancy (if any) as well as to children yet to be conceived. By this standard, 50 percent of women in union wanted no additional children in 1980, an increase over the 45 percent who did not want more children in 1975.

The potential demand for the purpose of spacing births can be assessed by the responses to a question posed in the EPA-83 to women who did want to have more children. Only 26 percent said they would like to have their next child right away, while 45 percent said they would like to wait two or more years before having another child.

The surveys indicate that a large fraction of the population agrees with the notion of family planning. Of the women who were married or in a consensual union in the EPA-83 sample, only 12 percent said they disagreed with family planning (estuvieron en desacuerdo con la planificacion familiar). Surprisingly, in the EPAH-84 sample, an even smaller fraction of men disagreed with the idea that a woman could use a family planning method. Of the men who were married or in a consensual union, and who approve of a woman practicing family planning, the method that they preferred was female sterilization, followed by rhythm. Of men in union that knew of either the pill or the IUD, only 37 percent in each case agreed with a woman using these methods. The comparable fractions were 79 percent for female sterilization, and 95 percent for rhythm. Of the men who disagreed with women using either the pill or an IUD, the vast majority gave as their reason the effect the method would have on the health of the woman. The possible importance of these negative views is heightened by the responses given by men to a question regarding who was responsible for family planning decisions. Only 19 percent said the woman was responsible, 37 percent said both were, and 42 percent

said such decisions were the exclusive prerogative of the male. What is more, 81 percent of these male respondents were of the opinion that a woman had more freedom to have sex with another man if she were practicing contraception.

Resistance to family planning methods was also evident in the EPA-83 survey results. Of the woman in union who were not pregnant at the time of interview, only 40 percent of those not practicing contraception said it was because they wanted to have another child. Fully 35 percent said it was because the methods might do them some harm. Of the 79 percent of these non-users who said they might use a method in the future, 25 percent said they would opt for sterilization, 42 percent for pills, and only 8 percent for an IUD.

An unusual additional source of information about reproductive ideals and decision making is the module on the costs and benefits of children included in the ENF-80. In brief, the majority of respondents declared that they did not see any advantage to be had from having a large number of children. On the other hand, nearly all respondents listed reasons (mostly economic) why it would be advantageous to have a small number of children.

A final observation is that in the EPAH-84, 15 percent of the respondents said they might be willing to have a vasectomy at some point in the future.

II.1.6 Maternal and Child Health Care

The two ENF surveys constitute a rich source of nationally representative data on the use of maternal and child health care services. In both questionnaires the maternal and child health module was administered only to women who had been pregnant at some point during the year preceding the interview. The percentage of respondents who reported having received prenatal care increased from 79 percent in the 1975 survey to 92 percent in the 1980 survey. More than 80 percent of the respondents to this module in the ENF-80 had had at least one urine test, 64 percent at least one blood test, and 68 percent had been vaccinated against tetanus. The proportion of women whose delivery occurred in a hospital increased between the two surveys. The proportion of women whose delivery occurred at home decreased from 24 percent in 1975 to 15 percent in 1980. In 1980 over 60 percent of the reported deliveries occurred in a public hospital or maternity ward, and over 80 percent of all reported deliveries were attended by either a doctor or a nurse. Between the two surveys there appears to have been a dramatic increase in the number of infants who received a medical checkup, with 60 percent of all infants receiving such attention in 1980.

II.2 Policy Perspectives and Concerns

II.2.1 Preponderance of Female Sterilization

One of the main concerns of nearly all those interviewed was the need to increase the relative importance of methods other than female sterilization. One common perception is that this method is adopted too late in the reproductive cycle to have much of an impact on fertility. It was felt that if women used contraception to space their children, they would have fewer children when they eventually opted for sterilization. In another interpretation, the problem with the considerable readiness to select this method is that many couples, under the pressures generated by the current economic crisis, may be taking an irreversible decision they will later regret.

There does not appear to be a consensus as to why sterilization became so popular in the Dominican Republic. The phenomenon cannot be easily attributed to aggressive campaigning and recruitment by CONAPOFA and PROFAMILIA since, to judge by the results of the first ENF, sterilization's popularity began well before 1975, before sterilizations were even offered by the national program. As late as 1983, 60 percent of the sterilizations recorded in the EPA were reported as having been performed in the private sector. What is more, the bulk of the sterilizations now performed by CONAPOFA are not done in the immediate post-partum period when it would be easiest to pressure women into accepting this surgical intervention.

A more reasonable conclusion is that somewhat by chance, but in the presence of a strong felt need to limit fertility, sterilization became the method of choice through a sort of snowball effect. As more people opted for the procedure, recognition spread that it was a relatively simple, safe, and effective. Rumors that it might lead a woman to become crazy or give her cancer were dispelled by the example of the growing number of satisfied acceptors. Indeed a sui generis vocabulary evolved whereby the word "prepare" (I am prepared, or I am going to prepare my wife) was used for such an operation.

A point often made about the acceptability of sterilization in Latin America is that it is not seen as a contraceptive method, but rather as a medical procedure falling entirely within the purview of a physician, and constituting no business of a priest. This notion finds some support in the responses to the open question in the surveys that asked women to enumerate the contraceptive methods that they knew of. In the EPA-83, only 24 percent of the respondents listed sterilization as a contraceptive method, although with prompting 95 percent claimed to have

knowledge of the procedure. An almost identical set of responses was obtained from the men interviewed in the EPAH-84 survey.

An important consequence of the snowballing growth in the acceptability of sterilization is the persistence, in the wake of relatively low acceptance, of rumors concerning the safety and effectiveness of the IUD in particular, and also of the pill. The survey results alluded to above indicate that both men and women have concerns of this type, and appear to be influenced by misinformation concerning these methods. Nevertheless, one convincing opinion was that the problem with the acceptability of the IUD was not so much with the patient as with the doctor. Although Dominican women had negative preconceptions concerning the IUD, a knowledgeable doctor or nurse who was willing to take the time to explain the method to a patient would have no trouble finding willing acceptors.

II.2.2 The Problem of Integration

There is an almost universally perceived tension between a desire to upgrade the health services provided by SESPAS and other public sector institutions, and the fear of becoming dependent on a weak and unresponsive public sector health delivery system for the provision of family planning services. Part of the problem is that the state appears to have little leverage over the medical profession. The doctors are perceived as getting what they want or can get from the government, but being prepared to offer relatively little in return. Those with the darkest view of the public sector state that the government hospitals, clinics, and health workers are too many and too corrupt and inefficient to constitute a reasonable target for reform. Indeed, the incumbent Minister of Health is seen as having given up on the idea of such reform, opting instead for a series of campaigns to promote vaccinations and other measures, drawing on the resources of the whole governmental apparatus rather than on the personnel at his disposal in the health sector.

From this point of view, the past decision to integrate family planning services with maternal and child health services is seen as a costly mistake. The solution is to backtrack along the path of integration in the public sector, and to develop the capacity to provide subsidized family planning services in the private sector.

From another perspective, however, integration is a major achievement that has yet to realize its full potential. For better or worse, SESPAS does provide a large fraction of the health services utilized by the two-thirds of the population in the most difficult economic circumstances. Integration means

that family planning will be available free to all the system's clients, and that there will be ample opportunity to promote family planning while providing maternal and child health services during the course of a pregnancy, at delivery, and in the post-partum period.

II.2.3 Creating a Demand for Better Policy

Researchers at both CONAPOFA'S Departamento de Investigacion y Evaluacion and at PROFAMILIA'S Instituto de Estudio de Poblacion y Desarrollo (IEPD) feel that in addition to conducting studies that have a direct bearing on the programs undertaken by their respective organizations, they should do research that will reach a broad audience and help create a demand for better policy with respect to population, health, and overall development in the Dominican Republic. The ambition is to expand the scope of their work beyond carrying out one fertility or prevalence survey after another, and to increase the amount of analysis performed on the data that they do collect.

As researchers in both institutions are quick to point out, the wealth of survey data collected in the Dominican Republic has not been fully utilized. For the most part, analysis has been limited to that contained in the initial report, and most of the few in-depth analyses that exist have been carried out abroad (although often by Dominicans). The reason that more analyses have not been done at CONAPOFA and IEPD seems to be threefold. First, these organizations are short on staff. Second, the researchers who do work for these institutions do not all have the required training and experience, and those who do are often burdened with administrative responsibilities. Third, there has been a continual economic and administrative problem in obtaining ready access to a computer.

II.2.4 Implicit Concern for Birthspacing

While the national family planning program does not seem to have explicit objectives with regard to birthspacing, an underlying interest in this issue certainly exists. The desire to increase the prevalence of pills and IUDs (see II.2.1 above) derives mostly from a desire to increase the length of birth intervals. Moreover, there is a growing awareness of the need to promote breastfeeding. The recently formed Comision Nacional para el Bienestar de la Madre y del Nino, is expected to have a strong focus on breastfeeding, and SEPAS will coordinate its ongoing efforts with those of the commission.

Two considerations, which did not figure as prominently as they might have, are the possible negative influence of oral

contraceptive use on breastfeeding, and the positive influence of longer birth intervals on child survival. Whether the rapidly increasing availability of pills is having an effect on breastfeeding is an issue that could be (but has not yet been) explored with the survey data. Moreover, the finding from the ENF-75 survey that birth intervals of less than 24 months effectively double the risk of infant mortality (recently published in a comparative study by Hobcraft, McDonald, and Rutstein) does not seem to have commanded much attention, and the analysis has not been replicated with the ENF-80 data.

II.3 Setting and Achieving Targets for the Next Five Years

II.3.1 Introduction and Perspective on the Parts of the Problem

The proposed family planning project is expected to contribute to a decline in the total fertility rate from an estimated value of 3.97 in 1985 to 3.15 in 1990, in line with reaching replacement level fertility by the end of the century. To assess these goals, it is useful to compare the program performance that would be required to meet them with the program's observed performance during the recent past.

To do that, two preliminary target-setting exercises were conducted with the help of the analysts at CONAPOFA using John Bongaarts' intermediate fertility variables model, and the age-specific version of the TARGET computer program developed by The Population Council for The Futures Group. As applied to the Dominican Republic, this methodology presents some difficulty. The Bongaarts model focuses exclusively on the experience of currently married women and does not encompass illegitimate fertility. As noted in II.1.4, however, there is appreciable use of contraceptives in the Dominican Republic by single men and by women who are separated or divorced. For this reason, several analysts have been reluctant to commit themselves to a target-setting framework that ignores this use. While this point of view commands sympathy, the procedure here will be to break the problem into parts and to retain the Bongaarts framework for the part comprised by the experience of married women. It is probable that the model can also be used for women who are divorced, separated, or widowed. In a separate analysis, one would only need to submit assumptions about the fertility of these women, their initial rates of contraceptive use, and, of course, the proportion of women in each age group in this marital state.

The population of never-married persons (solteros and solteras) also probably needs a separate analysis. The position here is that contraceptive use in the single population has the bulk of its demographic impact in terms of facilitating a rise in

the age at entry into an established conjugal union. Such a rise can, of course, be built into the assumptions one makes about the proportion of women in union in the different age groups in the main analysis of married women. While it is important to focus on the needs of the single and the separated, changes in their experience over the next five years are not likely to have a major impact on the total fertility rate, just as changes in their experience have had a relatively small impact on fertility in the recent past. In short, to assess the proposed targets, not much will not be lost by temporarily restricting attention to women currently married or in a consensual union.

II.3.2 1975-1983

The documentation of fertility decline and contraceptive use provided by the three women's surveys (ENF-75, ENF-80, EPA-83) constitutes a useful basis for finding out how well the Bongaarts model accounts for fertility change in the Dominican Republic. Choosing 1975 as the initial year in a target-setting exercise, the baseline assumptions about nuptiality, fertility, and contraceptive use may be taken from the ENF-75. Allowing some foresight and setting the target fertility rate for 1983 equal to the rate estimated by the EPA-83, the results of the exercise define what increase in contraceptive use would have been needed for the decline. To the extent that this result is similar in magnitude to the observed increase between the two surveys, there is a basis for believing that the model works well.

In addition to the fertility rate for 1983, the program also needs to be supplied with the method mix for that year. By also setting this mix equal to the mix observed in the EPA-83, and on the basis of estimated levels of discontinuation and effectiveness of the different methods, the program is able to calculate the numbers of acceptors of different method that should have been observed in each intervening year.

The output for the 1975-1983 run is attached as Appendix 2, and is self-explanatory. The main conclusion to be drawn from the exercise is that the change in contraceptive use and the switch towards more effective methods observed between the 1975 and 1983 surveys does indeed account for the decline in the total fertility rate between those years. Another point worth highlighting is that, according to the program, about 223,000 women in union between the ages of 15 and 49 had been sterilized by mid-1983. The national family planning program claims to have done only about 92,000 procedures by the end of 1983. Thus, as reported in the EPA-83, roughly 40 percent of sterilized women in union and of reproductive age had obtained the service from the

public sector. (This consistency between the survey reports and the reported cumulative total of procedures done in the public sector has previously been noted by IFPD Director, Nelson Ramirez.)

II.3.3 1983-1990

Since the target level of the total fertility rate for 1990 was already established in the Project Identification Document, the critical assumption to be supplied for the second exercise was the mix of contraceptive methods in 1990. In the initial run the method mix was not supposed to vary greatly. The percentage of use accounted for by female sterilization remained constant at 60 percent and the share of pills, IUDs, vasectomies, and NORPLANT all increased slightly (by about two percentage points) at the expense of other methods.

The issue in this exercise concerns the program performance that would be necessary to achieve the postulated TFR by 1990. The required number of acceptors of the different methods depends, in turn, on the assumptions made concerning discontinuation rates and effectiveness. The default assumptions were adopted concerning effectiveness, 21 percent of IUDs were assumed to be removed or expelled one year after insertion, a percent of pill acceptors were assumed to discontinue use in the same time span. In this case, the computer program's output concerning the total number of acceptors of different methods in 1984 and 1985 can be compared with the number of acceptors actually reported by the national family planning program.

The results of this preliminary exercise appear to indicate that a TFR of 3.15 in 1990 is an attainable target. The number of sterilizations that would have to be performed each year increases from 22,000 in 1984 to 29,000 in 1989. Since the combined number of procedures performed by CONAPOFA and PRO-FAMILIA in 1984 was 22,000, and presumably many more were done in the private sector, it would seem that acceptance of this method is proceeding ahead of schedule. (The number of sterilizations performed by the program in the first half of 1985 indicates, however, that acceptance may have since declined somewhat.)

A similar conclusion can be reached regarding the number of pill and IUD acceptors recorded by the program in 1984. The 29,000 pill acceptors can be compared with the 33,500 "required" acceptors of this method in 1984. Similarly, the recorded 10,000 IUD acceptors can be compared with the 11,000 required acceptors. In both cases, the family planning program is operating at a level that would be nearly sufficient to stay on the targeted path of fertility decline without any help from the private sector. The only qualification that needs to be kept in mind is

that these results depend directly on the postulated rates of method discontinuation.

III. RECOMMENDATIONS

III.1 Continue with the idea of reaching replacement level fertility by the year 2000, and a TFR of 3.15 by 1990 as a concomitant outcome of expanding the availability and increasing the quality of contraceptive services provided by CONAPOFA and PROFAMILIA. These targets are certainly in line with the recent performance of the program. Furthermore, continued underlying demand for contraceptive services would seem to be assured by the awareness of most Dominican men and women that they cannot afford to have a large family.

III.2 The program should increase its emphasis on birthspacing and should develop explicit guidelines about the time that should elapse between births, about the duration and pattern of breastfeeding, and about the methods to be used to space births. The benefits to be obtained from improved birthspacing are both reduced fertility rates and increased health of mothers and children. Progress would seem to depend on increasing the acceptance of IUDs together with the quality of maternal and child health care. It may also entail restricting pill use among women who might otherwise continue to breastfeed their children.

III.3 Target setting regarding birthspacing should be informed by further analyses of the 1975, 1980, and 1983 surveys. The surveys constitute a potential source of additional information on the length of birth intervals, and on a series of relevant relations such as those between contraceptive use and breastfeeding, between the use of medical services and breastfeeding, between the use of medical services and contraceptive practice, and between the length of birth intervals and child survival. Once the situation in the recent past has been diagnosed, the next step would be to establish targets that constitute an improvement on this situation. Certainly one such target would be to reduce the proportion of second and higher order births less than three years after the birth of the preceding child.

III.4 The timely opportunity presented by the Demographic and Health Surveys should be fully utilized. The core questionnaire needs to be supplemented with questions that would help identify a respondent's relationship with the health care system. Sufficiently specific questions as to where and from whom respondents received maternal and child health services should expand on questions 403A and 404. Questions on cesarean sections

and on the details and circumstances of sterilizations might also be warranted.

Since DHS constitutes yet another survey of individual women of reproductive age, serious consideration should be given to an effort to collect data on the contexts in which respondents are found. Particularly useful might be an institutional survey that would document the different kinds of family planning and health care services available to women in the localities falling in the DHS sample. Such a survey might usefully include modules that would seek to determine the knowledge, attitudes, and practice of service providers.

III.5 The institutional capacity to analyze survey data should be increased. Valuable steps in this direction have already been taken with the introduction of microcomputers and training in their use. These efforts should be continued and expanded. This technology would seem to offer the possibility of breaking the data processing bottleneck that has contributed to the under-utilization of past surveys. Building the required capacity, however, will take time and funding. The research staff at CONAPOFA and PROFAMILIA may well have to be augmented, and there may be a need for graduate level training in analytical methods and statistics as well as more perfunctory instruction in the use of microcomputers and the statistical packages such as SPSS. While a logical goal is to develop the capacity to analyze surveys such as DHS and the surveys of fertility and prevalence, it is clear that this same capacity could be put to a wide range of different uses.

The experience and zeal of the researchers now working for CONAPOFA and PROFAMILIA constitute a valuable resource. The proposed project should enable them to fulfill their ambitious and worthy goals.

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TABLES

Table II.1-1

 Age-Specific Fertility Rates (per thousand), Dominican Republic,
 1965-1984.

<u>Age Group</u>	<u>1965-69</u>	<u>1973-74</u>	<u>1975-79</u>	<u>1982-84</u>
15-19	157	113	110	86
20-24	310	286	245	221
25-29	316	246	226	230
30-34	279	208	176	166
35-39	215	166	122	94
40-44	118	52	48	11
45-49	22	7	16	9
TFR	7.1	5.4	4.7	4.1

TABLE II.1-2

Proportions of Women in Conjugal Unions Practicing Contraception,
and the Distribution of Practice by Method, Dominican Republic,
1975 and 1983.

	1975	1983
Percent practicing contraception	32	46
Percent distribution by method:		
Pills or injectables	26	19
IUD	9	8
Condom	5	3
Other female barrier methods	7	1
Rhythm	4	3
Withdrawal	11	5
Vasectomy	0	0
Female sterilization	38	60
Other	0	1
Total	100	100

APPENDIX I

INTERVIEWS

Interviews

Lic. Magaly Caram de Alvarez, Executive Director, Asociacion Dominicana Pro Bienestar de la Familia (PROFAMILIA)

Dr. Milton Cordero, Medical Advisor, PROFAMILIA

Dr. Ramon Portes Carrasco, Executive Secretary, Consejo Nacional de Poblacion y Familia (CONAPOFA)

Nelson Ramirez, Director, Instituto de Estudios de Poblacion y Desarrollo (IEPD)

Lic. Leovigildo Baez, Director of the Research and Evaluation Department, CONAPOFA

Lic. Maritza Molina Achecar, Director of Survey Research, Research and Evaluation Department, CONAPOFA

Dr. Jose Miguel Guzman, Demographer, CELADE

Bainbridge Cowell, Vice-Consul, U.S. Consulate, Santo Domingo

Luis Gonzalez Fabra, M.Sc., Advisor to the President for Public Relations, Palacio Nacional

Dra. Carmela Franco, Surgeon, Maternidad Nuestra Senora de la Altagracia, SESPAS

Dr. Bernardo A. Fernandez Dilone, Chief of Outpatient Services, Maternidad Nuestra Senora de la Altagracia, SESPAS

APPENDIX 2
TARGET SETTING 1975 - 1983

APPENDIX 2

Target setting period:

First year: 1975

Last year: 1983

Fertility targets:

	Total fertility rates	Age specific fertility rates						
		15-19	20-24	25-29	30-34	35-39	40-44	45-49
1975	5.13	112.74	261.74	242.67	199.86	139.86	56.22	12.91
1983	4.10	85.93	221.91	231.16	166.33	94.67	11.16	8.84

Women of reproductive age (thousands):

	15-19	20-24	25-29	30-34	35-39	40-44	45-49	All ages
1975	280.5	219.2	175.7	140.5	119.9	102.1	88.6	1126.5
1983	356.3	303.2	240.8	190.4	153.3	125.5	105.9	1475.5

Proportions currently married

(CM)	15-19	20-24	25-29	30-34	35-39	40-44	45-49
1975 (.600)	.200	.530	.725	.803	.809	.789	.688
1983 (.562)	.170	.493	.724	.810	.796	.781	.711

Contraceptive prevalence in first year:
(percent of married women)

Method	15-19	20-24	25-29	30-34	35-39	40-44	45-49	All ages
MALE STER.	.0	.0	.0	.0	.0	.0	.0	.0
FEMALE STER.	.0	4.0	14.0	20.0	22.0	13.0	9.0	12.6
INJECTABLES	.0	.0	.0	.0	.0	.0	.0	.0
IUDS	3.0	5.0	8.0	8.0	7.0	5.0	3.0	6.0
PILLS	5.0	13.0	12.0	7.0	5.0	2.0	3.0	7.6
OTHER	5.0	5.0	6.0	6.0	6.0	7.0	3.0	5.6
Total	13.0	27.0	40.0	41.0	40.0	27.0	18.0	31.9

Method mix:

Method	1975	1983
MALE STER.	.0	.2
FEMALE STER.	39.7	59.8
INJECTABLES	.0	.0
IUDS	19.0	8.3
PILLS	23.8	18.8
OTHER	17.5	12.9
Total	100.0	100.0

Other proximate variables:

Duration of postpartum infecundability (in months):

1975: 5.0 months (index = .851)

1983: 5.0 months (index = .851)

Methods and their use effectiveness:

Method	Use effectiveness
MALE STER.	1.000
FEMALE STER.	1.000
INJECTABLES	.980
IUDS	.950
PILLS	.900
OTHER	.700

Average discontinuation rates:

MALE STER.	.010
FEMALE STER.	.010
INJECTABLES	.150
IUDS	.210
PILLS	.350
OTHER	.600

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ALL METHODS

Year	% Using	Users
1975	31.86	207.4
1976	33.50	224.8
1977	35.13	243.1
1978	36.74	262.1
1979	38.35	282.0
1980	39.94	302.8
1981	41.57	325.3
1982	43.19	348.9
1983	44.79	373.6

Method: FEMALE STER.

Year	% Using	Users	Acceptors	
			Total	Per 1000 MWRA
1975	12.65	82.3	---	---
1976	14.14	94.9	15.5	23.02
1977	15.71	108.7	17.0	24.56
1978	17.36	123.8	18.6	26.13
1979	19.08	140.3	20.4	27.74
1980	20.87	158.3	22.6	29.87
1981	22.77	178.2	25.1	32.04
1982	24.74	199.9	27.3	33.85
1983	26.78	223.4	---	---

Method: IUDS

Year	% Using	Users	Acceptors	
			Total	Per 1000 MWRA
1975	6.05	39.4	---	---
1976	5.91	39.7	8.8	13.15
1977	5.73	39.6	8.5	12.25
1978	5.50	39.2	8.0	11.24
1979	5.23	38.5	7.4	10.12
1980	4.91	37.3	6.8	8.93
1981	4.56	35.7	6.0	7.64
1982	4.16	33.6	5.0	6.18
1983	3.72	31.0	---	---

Method: PILLS

Year	% Using	Users	Acceptors	
			Total	Per 1000 MWRA
1975	7.59	49.4	---	---
1976	7.77	52.1	20.8	30.97
1977	7.92	54.8	21.8	31.45
1978	8.06	57.5	22.7	31.84
1979	8.17	60.1	23.6	32.14
1980	8.26	62.6	24.5	32.33
1981	8.34	65.2	25.4	32.46
1982	8.39	67.8	26.3	32.49
1983	8.42	70.2	---	---

APPENDIX 3

TARGET SETTING 1983-1990

APPENDIX 3

Target setting period:

First year: 1983

Last year: 1990

Fertility targets:

	Total fertility rates	Age specific fertility rates						
		15-19	20-24	25-29	30-34	35-39	40-44	45-49
1983	4.10	85.93	221.91	231.16	166.33	94.67	11.16	8.84
1990	<u>3.15</u>	<u>59.25</u>	<u>182.27</u>	<u>189.96</u>	<u>126.36</u>	<u>65.02</u>	<u>2.48</u>	<u>4.66</u>

Women of reproductive age (thousands):

	15-19	20-24	25-29	30-34	35-39	40-44	45-49	All ages
1983	356.3	303.2	240.8	190.4	153.3	125.5	105.9	1475.5
1990	<u>378.6</u>	<u>358.8</u>	<u>317.1</u>	<u>255.7</u>	<u>200.5</u>	<u>161.1</u>	<u>127.6</u>	<u>1799.4</u>

Proportions currently married

(CM)	15-19	20-24	25-29	30-34	35-39	40-44	45-49
1983 (.562)	.170	.493	.724	.810	.796	.781	.711
1990 (.520)	<u>.153</u>	<u>.461</u>	<u>.701</u>	<u>.801</u>	<u>.797</u>	<u>.783</u>	<u>.718</u>

Contraceptive prevalence in first year:
(percent of married women)

Method	15-19	20-24	25-29	30-34	35-39	40-44	45-49	All ages
MALE STER.	.0	.0	.4	.0	.0	.0	.0	.1
FEMALE STER.	.0	7.4	25.3	39.7	46.9	38.7	27.1	27.8
INJECTABLES	.0	.0	.0	.0	.0	.0	.0	.0
IUDS	2.3	4.0	5.6	3.3	4.0	3.5	1.3	3.8
PILLS	12.4	17.8	11.8	8.0	2.5	.4	.4	8.5
OTHER	4.2	6.6	7.3	6.2	5.6	5.7	4.6	6.1
Total	18.9	35.8	50.4	57.2	59.0	48.3	33.4	46.2

Method mix:

Method	1983	1990
MALE STER.	.2	2.0
FEMALE STER.	60.2	60.0
INJECTABLES	.0	2.0
IUDS	8.2	10.0
PILLS	18.4	20.0
OTHER	13.1	6.0
Total	100.0	100.0

Other proximate variables:

Duration of postpartum infecundability (in months):
 1983: 5.0 months (index = .851)
 1990: 5.0 months (index = .851)

Methods and their use effectiveness:

Method	Use effectiveness	Average discontinuation rates:
MALE STER.	1.000	MALE STER. .010
FEMALE STER.	1.000	FEMALE STER. .010
INJECTABLES	.980	INJECTABLES .200
IUDS	.950	IUDS .210
PILLS	.900	PILLS .350
OTHER	.700	OTHER .600

ALL METHODS

Year	% Using	Users
1983	46.23	385.6
1984	47.84	411.7
1985	49.44	439.2
1986	51.12	467.3
1987	52.80	496.9
1988	54.47	527.9
1989	56.15	560.3
1990	57.82	594.4

Method: FEMALE STER.

Year	% Using	Users	Acceptors	
			Total	Per 1000 MWRA
1983	27.82	232.0	---	---
1984	28.77	247.6	21.9	25.41
1985	29.73	264.0	23.4	26.29
1986	30.72	280.9	24.9	27.22
1987	31.72	298.5	26.2	27.89
1988	32.71	317.0	27.7	28.55
1989	33.70	336.3	29.1	29.20
1990	34.69	356.6	---	---

Method: IUDS

Year	% Using	Users	Acceptors	
			Total	Per 1000 MWRA
1983	3.78	31.5	---	---
1984	4.04	34.7	10.9	12.67
1985	4.30	38.2	11.8	13.33
1986	4.58	41.9	12.8	14.05
1987	4.87	45.8	14.0	14.85
1988	5.16	50.0	15.2	15.68
1989	5.47	54.6	16.5	16.53
1990	5.78	59.4	---	---

Method: PILLS

Year	% Using	Users	Acceptors	
			Total	Per 1000 MWRA
1983	8.49	70.8	---	---
1984	8.89	76.5	33.5	38.91
1985	9.31	82.7	35.6	40.10
1986	9.74	89.1	37.9	41.42
1987	10.19	95.9	40.6	43.15
1988	10.64	103.1	43.5	44.92
1989	11.10	110.8	46.6	46.71
1990	11.56	118.9	---	---

Method: INJECTABLES

Year	% Using	Users	Acceptors	
			Total	Per 1000 MWRA
1983	.00	.0	----	----
1984	.14	1.2	1.5	1.75
1985	.28	2.5	2.0	2.20
1986	.44	4.0	2.5	2.68
1987	.60	5.7	3.0	3.19
1988	.78	7.5	3.6	3.71
1989	.96	9.6	4.3	4.26
1990	1.16	11.9	----	----

Method: MALE STER.

Year	% Using	Users	Acceptors	
			Total	Per 1000 MWRA
1983	.08	.7	----	----
1984	.21	1.8	1.2	1.38
1985	.35	3.1	1.3	1.50
1986	.49	4.5	1.5	1.63
1987	.64	6.1	1.7	1.76
1988	.81	7.8	1.8	1.91
1989	.98	9.8	2.0	2.05
1990	1.16	11.9	----	----