9320632 (3)
PD-AAD-361-A1

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT PAPER FACESHEET

1. TRANSACTION CODE: [A] (A = ADD, C = CHANGE, D = DELETE) — PP

2. DOCUMENT CODE: 3

3. COUNTRY/ENTITY: Worldwide

4. DOCUMENT REVISION NUMBER: 1 — 98p

5. PROJECT NUMBER (7 digits): 932-0632

6. BUREAU/OFFICE: A. SYMBOL: DSB; B. CODE: 36

7. PROJECT TITLE (Maximum 40 characters): Family Planning, Operations Research

8. ESTIMATED FY OF PROJECT COMPLETION: FY 85

9. ESTIMATED DATE OF OBLIGATION: A. INITIAL FY 76; B. QUARTER (Enter 1, 2, 3, or 4); C. FINAL FY 84

10. ESTIMATED COSTS ($000 OR EQUIVALENT $1) ~~6,185~~ 50,387*

A. FUNDING SOURCE	FIRST FY (FY 79) B. FX	C. L/C	D. TOTAL	LIFE OF PROJECT E. FX	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL	6,185		6,185	50,387		50,387
(GRANT)	6,185		6,185	50,387		50,387
(LOAN)						
OTHER U.S. 1.						
OTHER U.S. 2.						
HOST COUNTRY						
OTHER DONOR(S)						
TOTALS	6,185		6,185	50,387*		50,387

11. PROPOSED BUDGET APPROPRIATED FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH CODE C. GRANT	D. LOAN	E. 1ST FY 79 F. GRANT	G. LOAN	H. 2ND FY 80 I. GRANT	J. LOAN	K. 3RD FY 81 L. GRANT	M. LOAN
(1) PN	J430	J440		5585		6100		7595	
(2) PN (Health)	J530	J520		300		300		300	
(3) FN	J320	J380		300		300		300	
(4)									
TOTALS				6185		6700		8195	

A. APPROPRIATION	N. 4TH FY 82 O. GRANT	P. LOAN	Q. 5TH FY 83 R. GRANT	S. LOAN	LIFE OF PROJECT T. GRANT	U. LOAN
(1) PN	7735		8075		48,587	
(2) PN (Health)					900	
(3) FN					900	
(4)						
TOTALS	7735		8075		50,387	

12. IN-DEPTH EVALUATION SCHEDULED: MM 3 YY 81

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA BLOCKS 2, 11, 14, OR 15 OR IN PRP FACESHEET DATA BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

[1] 1 = NO 2 = YES

*Includes $4,572 obligated from FY 76 thru FY 78

14. ORIGINATING OFFICE CLEARANCE

SIGNATURE: R. T. Ravenholt

TITLE: Director, Office of Population, DSB

DATE SIGNED: 5-11-79

15. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION

AID 1330-4 (3-78)

PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS-

PART II

Name of Country: Interregional

Name of Project: Family Planning, Operations Research

Number of Project: 932-0632

I hereby approve grant financing of not to exceed forty-five million, eight hundred fifteen thousand United States Dollars ($45,815,000) for the Family Planning, Operations Research Project, during the period Fiscal Year 1979 through Fiscal Year 1984 to finance the activities described in the Project Paper. This raises the total level of funds approved under this project to $50,387,000. Of this amount, I authorize funding in FY 1979 not to exceed six million, one hundred and eighty-five thousand United States Dollars ($6,185,000).

Acting Deputy Administrator

Date

JUL 17 10 21 AM '79 EXECUTIVE SECRETARIAT

DEPUTY

ACTION MEMORANDUM FOR THE ACTING ADMINISTRATOR

JUN 22 1979

THRU: ES
THRU: A-AA/PPC, Charles Paolillo
FROM: AA/DS, Sander M. Levin

Problem: To obtain your approval for the continued support for the Operations Research, Family Planning Project as follows: To approve a total of $45,815,000 for support of Operations Research (OR) activities for the period of FY 1979-84. This will result in establishing a total life of program funding of $50,387,000 for the period FY 1976-1984.

Discussion: This Project was initially approved on August 19, 1976, for the period from FY 1976-1980 for a total funding level of $7,675,000. Subsequently, the life of project funding level was increased to $8,275,000 on August 19, 1977. On May 2, 1979, an amendment to the original Project Paper was approved as a result of an Agency-wide review. These materials are attached. This modification of the Project would increase the life of the project from FY 1976-1981 to FY 1976-1985, and the life of project funding level from $8,275,000 to $50,387,000. The purpose and objectives of the Project remain unchanged. The increase in funds and extended life of Project is due to the success of the OR program during its first three years. The utility of OR projects has become clear to USAID Missions and Regional Bureaus. The demand for OR technical assistance and funding support for family planning and basic health delivery now greatly exceeds current authorization levels. The increase and extension are also attributable to the consolidation of several other projects, previously authorized under separate project papers. For example, the very successful contract with Columbia University (for short and long-term technical assistance and subcontract support, at over $13 million during FY 1979 through FY 1984) has been placed under the subject Project Paper as a new cooperative agreement. Consolidation was indicated due to commonality of project concepts, objectives, and strategies; improved coherence in program and technical management are anticipated as a result. Life of project extension is required to meet the demand for multi-year support to programs now operative and for those which are under active negotiation. OR activities are now being seen as an important adjunct to general program assistance.

The OR Project was initiated to develop more cost-effective family planning delivery systems that are within the wherewithal of the host country governments. Two basic forms of delivery systems are being tested: household distribution and village-based distribution. With household distribution, field procedures are devised which insure that the delivery system will approach full coverage of the treatment population through the systematic canvassing of households. Household distribution is typically a one-time intervention. After the community has been canvassed, the resupply and followup functions are handled by a village worker. While household visits are often made under a village-based delivery system, they are not done in a systematic fashion and the usual manner of a person receiving family planning services is to visit the distribution points.

[illegible]

Delivery systems have been or are being tested in 14 different countries. These efforts have been very successful. Examples of the increase in contraceptive use among married women of reproductive age before and after the implementation of the delivery system are: Bangladesh - 1.1 percent to 36 percent; Egypt - 19.1 percent to 27.7 percent; Haiti - 4.5 percent to 18.8 percent; Korea - 20.7 percent to 34.6 percent; Mexico - 7.6 percent to 34 percent; and Tunisia - 6.6 percent to 24.2 percent. These dramatic increases were achieved at cost levels that were within the resources of the respective governments.

Although the major focus of OR activities is to test delivery systems, a number of studies have included discrete analysis of system components, such as: charging versus non-charging; type of distribution point; family planning and health versus health; contraceptive mix; level of compensation for fieldworkers. The factors that are chosen for examination reflect concerns of the host country governments.

Most of the delivery systems tested have health components. The health services focus on Maternal and Child Health services that can be provided by non-medical personnel and which have the potential for impacting on infant and child mortality. A great deal of attention is being given to oral rehydration through the use of oral rehydration salts, such as Oralyte. It is well documented that oral rehydration can reduce infant and child mortality rates by as much as 50 percent among populations with incidence of diarrhea. Although the technology exists for reducing deaths due to dehydration, the system to deliver this technology in such a way that it will be utilized has not yet been developed. Since past and ongoing OR activities have documented that family planning services can effectively and efficiently be delivered at the household or community level, health services like oral rehydration are being added to the basic family planning delivery system. The combination of health interventions and family planning, both of which are associated with reductions in infant, child and maternal mortality, have the potential for dramatically and positively changing the health and demographic profile of communities. These efforts represent the most exciting development in the field of family planning and health during the last five years.

Recommendation: It is recommended that you sign the attached Project Authorization and Request for Allotment of Funds (PAF, Part II), by which action you will:

1) Approve the Operations Research Project in the amount of $45,815,000 for the period FY 1979-1984.

2) Authorize FY 1979 grant funding for $6,185,000.

Approved_____

Disapproved_____

Date_____

Attachments:
A. PAF
B. Memorandum, "Review and Approval Process for Subprojects," Duff G. Gillespie, May 1, 1979.
C. Amendment to Project Paper 932-0632.
D. Operations Research Projects, April, 1979.
E. Action Memorandum for Assistant Administrator, PHA, August 5, 1977.
F. Action Memorandum for the Administrator, May 10, 1976.
G. Project Paper 0632.
H. Memoranda regarding project evaluation plans and review of proposals, Dr. Stephen Joseph/Mr. Barry Sidman

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INTRODUCTION

The purpose of this document is to provide information in support of the extension of and additional funding allocation for Project 0632 Family Planning, Operations Research. The original Project is for 5 years (FY 76-FY 80) and has an approved funding level of $8,275,000. This amendment requests that the project's funding period be extended through FY 84 at a funding level of $45,815,000.

There are a number of reasons why this request is being made. However, the most important one is that the need and desire for Operations Research projects was grossly underestimated when the original Project Paper was written in 1976. For instance, the original PP estimated a total of 10 sub-projects would be funded under the project. To date, 13 sub-projects have been funded and an additional 5 are planned for funding this fiscal year. In addition, the average annual costs of projects was underestimated. In the original PP, this was projected to be around $255,000. The actual figure is in the neighborhood of $360,000. While some of this difference is undoubtedly due to inflation and the decline of the dollar, the size of projects are larger than we anticipated. A third reason for amending the Project Paper is to consolidate all operations research activities under one project. This would ease the administrative and monitoring demands on the staff.

The purpose of this amendment is not to change the purpose or objectives of the original PP. These remain the same and are found in the attached PP. The amendment will enable the Agency to expand and

continue this successful effort in the development of more effective and efficient family planning/health delivery systems.

PAST AND EXISTING PROJECTS

Since 1973, there have been 24 projects and sub-projects in the area of Operations Research that the Research Division has been involved in planning, implementing, monitoring and/or funding. These projects will be described in this section. Obviously, a detailed description of each project would result in an extremely long document. Therefore, an attempt will be made to outline the key features of each project and to provide an overview of the entire Operations Research effort.

I. Funding and Monitoring Mechanisms

As shown in Table 1, the Research Division has been involved with Operations Research Projects having total obligations of $8,172,000 during the years 1973 through 1978. Of these funds, 56 percent ($4.6 million) have been obligated through Project 0632. Of the remaining $3.6 million ($3,859,000 including excess Egyptian pounds), only $779,000 (or 20 percent) have been from the Research Division's budget. The remaining funds have been primarily from Missions.

The Research Division has employed a variety of funding and monitoring mechanisms for implementing Operations Research projects. Table 2 shows the four mechanisms used for all 21 projects that involved country-specific activities. It is our experience that the ideal funding and monitoring mechanisms is either by the Mission entirely or through the Mission utilizing AID/W funds. By having joint projects, the Mission

and AID/W staff can draw upon the special strengths of their respective personnel and organizations. AID/W can provide technical monitorship and assistance while the Mission personnel handles the day-to-day monitoring and administration of the projects. Thus far, this arrangement has worked well in all but one case. It is important to note that the AID/W central project 0632 has not lessened the propensity to have joint Mission/AID/W projects. Table 3 shows that 63.6 percent of the 0632 sub-projects have been through the Missions.

II. Overview of Project Performance

Attachment A (Operations Research Projects) gives summaries of each project and sub-project designed to test contraceptive and, in some cases, health delivery systems. These summaries offer the reader a good picture of the Operations Research effort. There are a number of things that are noteworthy. First, considering the number of efforts described, it is remarkable that only one project had to be terminated due to an inadequate level of performance. This is Project No. 16, "Philippines". These projects are testing new types of delivery systems which, in many cases, constitute a radical departure from the host-country's existing delivery system. In addition, only one project, No. 18, Taiwan, did not have the hoped for results. Although this project was a successful research undertaking, its results strongly suggest that a household contraceptive distribution (and perhaps any type of community-based distribution) is not appropriate among populations with a high baseline contraceptive prevalence rate, in this case, 47 percent.

Indeed, although the control and the study population had comparable increases in contraceptive prevalence, the household distribution project did not result in as good a contraceptive mix, having a greater proportion of users on pills and condoms compared to the control's, IUDs and sterilization.

1. Mode of Distribution: The OR projects employ two forms of distribution--household and village-based. Household distribution is a form of village-based distribution. In projects with household distribution, the field procedures are devised which insure that the delivery system will approach full coverage of the treatment population through the systematic visiting of every household. How the canvassing of households is actually effected varies from project to project and depends on such things as the terrain, availability of field personnel, the attitudes of the host-country government, and the population density. The most effective way to insure complete coverage is through mapping the treatment population and then assigning distribution grids to the distributors.

Household distribution is typically a one-time intervention. After the community has been canvassed, the resupply and follow-up functions are handled by a village worker, who is frequently an ex-canvasser. In a sense, the household distribution system becomes a village-based system. Because household distribution is a singular event, cost has not been a major restraint in introducing these systems. The canvassers or distributors are payed for the actual canvassing and

are not employed on a full-time basis. The cost of the actual household canvass is marginal relative to the other costs which are incurred in a village-based program, e.g., training, supervision, etc.

Under a village-based delivery system, the fieldworkers are more reactive. While household visits are often made, they are not done in a systematic fashion and the usual manner of person receiving family planning services is to visit the distributor.

Both the household and village-based delivery systems place a great deal of emphasis on the preparation of communities that are in the catchment area. This phase is crucial for gaining the support and active cooperation of the community. In addition, under both systems, the training of the distributors is very important.

As shown in Table 4, 16 (80 percent) of the 20 active or completed projects designed to test delivery systems entailed household distribution. However, in Table 5 we see that only 3 (37 percent) of the 8 planned projects will have household distribution. It should be noted that the emphasis on village-based distribution suggested in Table 5 does not represent any change in strategy. For a variety of reasons, the planned projects just happened to have more village-based distribution projects.

A seemingly natural research design would be the comparison of a household distribution system with a village-based distribution system. However, there has not been interest in such a comparison among host-country investigators. Several attempts have been made to incorporate a comparison between household and village-based delivery systems

and in the case of the New Strategies, Mexico project, this was one of the variables that was to be examined. In order to simplify the project, the Mexican researchers requested that this comparison be dropped and AID/W concurred in this change. As the overall OR program evolves, it will be possible to make gross comparisons between household and village-based distribution systems.

2. Health Services: Of the 20 completed or active projects designed to test delivery systems, 12 (60 percent) have a health component. These projects are listed in Table 6. Of the 8 planned projects, 7 (87 percent) will have a health component (see Table 7).

The inclusion of health components has resulted more from philosophical and policy considerations than from any research hypothesis. Nevertheless, in 5 projects, there will be a comparison of delivery systems that are family planning only with those that are family planning and health. These projects are Nos. 4, 9, 13, 19, and 21 in Appendix A. With the exception of 19, no results for these projects are available. Some of the preliminary results from the Thai project (No. 19) are presented in a later section.

Since almost all the countries that will be focused on during the coming years consider family planning in strictly health terms, it is likely that the percent of projects that have a health component will become greater.

3. Results: The primary measure used to assess the project performance is contraceptive prevalence. The research component of the

projects vary in sophisitication. However, all projects have before and after measure of contraceptive prevalence.

In Table 8, the changes in contraceptive prevalence is given for those projects for which there are before/after data. Even a cursory examination of this table shows that the interventions have consistently and often dramatically resulted in increases in contraceptive use.

Some of the other output measures utilized in various projects are:

- fertility rate
- pregnancy rate
- open birth interval
- closed birth intervals
- birth rates
- method specific prevalence rates
- continuation rates

These variables are or will be analyzed in terms of a variety of socio-economic variables, especially such things as age and parity. In addition, three of the existing projects have control populations and a number of projects will have comparisons with the rest of their respective countries through data collected by the World Fertility Survey and, more frequently, the Westinghouse Contraceptive Prevalence Survey project.

Concerning those projects with health components, the emphasis on measurement has been on process variables, e.g., health services provided, percent of population immunized, etc. Less attention has been given to the measurement of health relative to family planning interventions due to the difficulty and expense associated with the collection of morbidity

and mortality data. In projects that have a strong research component with no funding restriction (Egypt with SA funds and the proposed INCAP study with Health and Nutrition funds) more sophisticated measures of the health intervention are being planned.

Contraceptive prevalence is the most often employed measure in describing the operations research projects. This is primarily because it is a good measure of program penetration and it is universally used in the projects. However, the reader should not assume that this is the only measure or the most important one for any particular project. The remainder of this section will give some examples of other findings that may be of interest.

a. Change in Births: While a number of studies will attempt to measure changes in births over time, the Matlab project in Bangladesh is unique in having a well established vital events registration system. In the Modified Matlab project, there are preliminary data which suggest that the intervention is having a dramatic effect on the treatment population. Figure I shows a marked and sustained decrease in births in the distribution area as opposed to the control area beginning in August, 1978. This decline began approximately nine months after the modified project began and, thus, occurred at the expected time. Fertility has decreased by about 30 percent, which is roughly the amount expected with the increase of prevalence experienced in the area.

b. Contraceptive Mix: Family planning experts have always emphasized the importance of having available in programs as wide a range of different types of fertility regulation technologies as

possible. Since every method has certain negative features for some couples, the greater the range of methods offered, the greater the likelihood couples will find a suitable method. The problem, of course, is to make wide spectrum of methods easily available.

In two projects, something of a natural experiment occurred. In Tunisia and Bangladesh, the initial phase of the household distribution in both countries emphasized the pill for a variety of reasons. At a later time, it was possible to introduce other methods. Table 9 shows the dramatic increase in contraceptive use after a greater variety of methods were introduced. A word of caution needs to be made concerning the Bangladesh data. While it is obvious that the contraceptive mix, especially Depo-Provera, resulted in an increase in contraceptive use, there were other programmatic changes that may have contributed to the increase in contraceptive use. First, the illiterate, local fieldworkers were replaced with more highly trained, literate women. Although there is no quantative way to prove that these women have improved the level of contraceptive use, the project staff have little doubt that this is the case. Additionally, basic MCH services were introduced to the modified area. The major jump in prevalence occurred before these services were fully introduced, but it may be that these services have a reinforcement effect on users. In the case of Tunisia, there were no other programmatic changes other than a wider number of methods offered.

c. Personnel: As suggested in the above discussion on contraceptive mix, an important consideration in examining these projects

is the characteristics of the personnel delivering the services. This is one area that will receive more attention in existing projects and new projects. From a programmatic sense, we have had to give much more attention and time to the training of fieldworkers than we originally thought would be necessary. Another "finding" is that it seems important that the fieldworkers have a higher socio-economic status than the population they serve. Otherwise, the information they give does not seem to carry much ligitimacy. These two qualitative assessments are not too surprising. However, there are some preliminary data that suggest that some other assumptions concerning fieldworkers need to be re-examined.

In the VDMS Morrocco project, regular MOH fieldworkers were used for the household distribution. Many of these workers are males and there was serious doubt if they would be able to relate to women in a Muslim society. However, as seen in Table 10, the initial data seems to show that males were just as effective distributors as females.

In the Family Planning and Health and Hygiene project, it was thought that the most effective distributors would be retailers, since the program is a quasi-commercial delivery system which charges for contraceptives. Also, it was believed that the addition of health commodities to the system would make the distributors more effective. Again, preliminary data do not support these contentions. In Figure II, the cost per acceptor in baht is contrasted with the percent of shopkeepers in each district. Based on the above

assumptions, one would predict that those districts with a high percent of shopkeepers and especially those that offered health commodities would be lower on the cost per acceptor scale since they would have more family planning customers than non-shopkeepers and generate more income through the sale of health commodities. As Figure II plainly shows, this is not the case.

d. Charging for Services: Two popular notions exist about charging versus non-charging for contraceptives. It is often said that by charging for contraceptives the individual will value the item more and, thus, be more likely to use the method than if it were free. Contrastingly, others believe that a charge for contraceptives introduces an unnecessary barrier to acceptance and utilization. Related to this issue is the desire to have programs that help pay their own way.

While everyone has opinions concerning the charging and pricing of contraceptives, there is not much in the way of data to clarify the issue. Moreover, since the positions and policies concerning charging are somewhat rigorously set among government officials, this issue has not been adequately addressed in existing OR projects and is unlikely to be adequately addressed in future projects.

Looking at Figure III, one could come to the conclusion that charging for contraceptives did represent a serious barrier. Figure IIIB shows the number of OC acceptors in the Thai Government program prior to October, 1976, when the Government charged 5 bhat (U.S. $0.20). Figure IIIA shows the number of acceptors in the

private sector CBFPS program that also sold OCs for 5 baht and another brand for 7 baht. As is dramatically shown, the change from charge to free resulted in a substantial increase in the number of new pill acceptors in the government program and an equally dramatic drop in the number of new acceptors in the CBFPS program, which continues to sell OCs.

On the other hand, other data suggest that charging for contraceptives has little impact on use. In the 38-village study in Menoufia, Egypt, there was interest in comparing free OCs with OCs for which there was a modest charge of 5 piastres (U.S. $0.07) per cycle. The main reason for this interest was that the government program charged this amount. As a result, half of the study population was charged 5 piastres per cycle for resupply, although all women were offered a free initial supply of 4 cycles during the household distribution, with those in the charging resupply area being told that they would be charged for resupply at the time of the distribution.

As shown in Table 11, the modest charge for a resupply of oral contraceptives and a free resupply system have comparable results. In terms of absolute increase in contraceptive use, the two types of delivery systems are almost identical except for the outlying villages under the "charge" resupply system which has a remarkable absolute increase in prevalence of 14.2 percent. In one of these two villages the resupply agent was a very active and highly motivated community development worker whose aggressive work accounts for the phenomenal increase.

e. Population Specific Variables: The Operations Research activities concentrate on program specific variables in their design and analysis. Obviously, one must also be keenly aware of the interaction between the program and the population. The community-based delivery systems tested under the Operations Research program are based on the premise that a non-clinical delivery system could effectively reach categories of persons who are not being served through more traditional delivery systems. Stated differently, community-based delivery systems should lessen the influence of population-specific characteristics that are typically associated with non-use.

In Table 12, data are presented from the 38-Village Study, Menoufia, Egypt, which support the above premise. Five variables were examined in terms of their influence on contraceptive use before and eight months after the household distribution. While these variables obviously have a strong influence on contraceptive use both before and after the distribution, their separate -Eta- and aggregate-Beta- (with the exception of "years married") influence is lessened after the full availability of oral contraceptives with a decline in the explained variance of 18.7 percent to 12.6 percent.

4. Cost-Effectiveness: Cost-effectiveness is one of the most important and difficult aspects of the Operations Research activities. Since the concept of cost-effectiveness is abused almost as frequently as it is used, it is appropriate to review how it is employed in this program.

Conceptually, the manner in which cost-effectiveness is utilized in this program is quite simple, i.e., what amount of resources (stated in monetary terms) is required to obtain a given result. Cost-benefit calculations have not yet been attempted and such analyses are felt to be of secondary importance to cost-effectivness. One point should be made clear--cost-effectiveness does not necessarily imply "low cost", a term commonly used to describe the ideal family planning/health delivery systems. Without a reference point, a low-cost delivery system is a subjective term that is meaningless, since what is low for one individual might be high for another. What these Operations Research projects are generally designed to do is to find the "lowest cost" system for attaining certain outputs.

The remainder of this section will outline some of the issues and findings concerning cost-effectiveness analysis in the Operations Research program. It should be emphasized that in most cost-analysis there are a number of objective decisions that are made which, in fact, are subjective. This is especially true in constructing the cost inputs, or denominator. The more complex the project, the more likely different persons looking at the same raw cost data will disagree on how these data should be treated. Since many of the calculations given below have been done by Research Division staff specifically for this Project Paper and with the opportunity to consult with their project staff counterparts, these figures should be considered provisional.

a. Pilot Projects: While cost-effectiveness is an underlying concern of the Operations research program, there have been and will be specific subprojects where the primary purpose is not to test the cost-effectiveness of a delivery system. The primary purpose of these relatively small pilot projects was to test the socio-cultural acceptability of household distribution and to indicate to policy makers that an intensive intervention could result in dramatic increases in contraceptive use. While there was a desire to try to keep costs down in these pilot projects, this was not an overpowering concern. In small, innovative projects, it is basically impossible to have a cost-effective project that results in dramatic outputs because of the numerous one-time costs that must be incurred in getting any project started and because the economy of scale is so restricted.

Below are annual per capita cost for four pilot projects, which subsequently were replicated among much larger populations:

Annual Per Capita Cost in U.S. Dollars
(Study Population)

	Pilot	Demonstration
Egypt	.54 (14,000)	.46 (200,000)
Korea	4.80 (21,000)	.30 (400,000)
Tunisia	1.25 (40,000)	.25 (144,000)
Mexico	2.62 (8,000)	.41 (1,000,000)

The above examples show that per capita costs are high for small, new projects. Yet these costs decrease when the delivery systems are tested in larger study populations.

b. Phased Development: Related to the strategy of using pilot efforts are the modification/replication phases that almost all subprojects follow. Figure IV illustrates the ideal steps a project goes through before it becomes regional or national. This diagram is based on the original Project Paper and has been followed as the various activities have evolved. Table 13 shows the replication status of the Operations Research projects.

The importance of taking the project development and implementation strategy into consideration when examining cost effectiveness cannot be overemphasized. With the possible exception of the Nicaraguan village-based distribution project (No. 15, Appendix A), all of the Operations Research activities designed to test delivery systems are front loaded in terms of inputs. In the case of the household distribution projects, this initial investment is substantial. However, the level of input decreases after the household distribution has been completed. This decline in inputs is not simply due to one-time costs (e.g., recruitment of staff, training, service form development, etc.) but also in terms of the overall level of inputs. Household distribution projects, and most village-based distribution projects, have an intensive service intervention which is not designed to be sustained over a long period of time. It would be very difficult, if not impossible, to have regular household distribution canvasses for a large population.

These service delivery systems are based on the premise that there should be an initial intensive and extensive intervention designed to increase the prevalence of use. Then, a much more modest resupply system is established, which will also serve as an initial source of resupply for those individuals who did not become users during the household distribution. The assumption is that the increase in the number of couples contracepting combined with easily accessable resupply/initial supply service points will result in maintaining a high level of contraceptive use since potential users would follow the example of their contracepting neighborhoods. Two examples will illustrate the importance of this point.

In the Euiryong, Korea pilot project, which covered a total population of 21,000, the cost per acceptor was $15.20. The household delivery system was modified and is now being tested among a study population of 400,000. The cost per acceptor for the expanded project during the last three years has been: 1976, $4.62; 1977, $4.38; and 1978, $4.13.* The big test for this, and other projects, will occur after all major inputs have been completed and the delivery system switches over to a maintenance function. When this occurs in 1980, there should be a dramatic drop in cost and, if the outputs remain at comparable levels, an even more dramatic improvement in cost-effectiveness ratios.

In the Shanawan, Egypt, project, which has had a study population of 14,000, the cost per acceptor was $13.52. In the expanded 38-village project (study population of 200,000) the cost per acceptor declined to $5.16. However, in both of these areas, there are now no additional service inputs above those provided by the government. And, since the GOE does not pay health personnel for family planning activities, the family planning cost consists essentially of contraceptives. While we do not have data for the 38-village study after the change over to the regular program, we do have such data for Shanawan. One year after the household distribution project, the contraceptive prevalence in Shanawan rose from 18.4 percent to 31 percent. Except for evaluation activities (monitoring of service statistics), there has been no service cost inputs into Shanawan. Yet, during the last two years, the contraceptive prevalence rose to 35 percent. The cost of these new acceptors is basically the commodity costs and the maintenance cost of keeping a user active for one year, which in Egypt is about $3.51.

* These cost figures are additive to the ongoing government cost. Approximately $14.00 should be added to these figures to get the "true" cost per acceptor.

The operations research efforts are not old enough to be able to say if the Shanawan experience will be typical. Most likely, most maintenance level costs in other programs will be greater because few developing world countries have as an extensive health infrastructure as rural Egypt. The point here is that the cost analyses for Operations Research projects to date focus on the time period in which the cost inputs are the greatest.

c. Output Measures: The two most common ways that family planning programs are measured in terms of cost-effectiveness are the cost per acceptor and cost per couple-years-of-protection (CYP), with some persons carrying the CYP calculations a bit further to determine the cost per birth averted. All of these output measures have the disadvantage of not giving one any indication of the cost required to attain a demographic impact from a program. In this sense, they can be very misleading, especially when various programs or types of interventions are compared.

In Table 14, two important points can be made concerning the cost per acceptor data for a number of national family planning programs. First, as noted above, the use of cost per acceptor data as an evaluation tool can be very misleading. For instance, the Dominican Republic had a relatively high cost per acceptor of $35.96 in 1976. Nepal, on the other hand, had a cost per acceptor in 1975 of only $13.75. What do these two figures tell one? Essentially, nothing. More important than cost per acceptor data is the fact that the WFS shows that Nepal has a contraceptive prevalence of only 2.3 percent. The comparable figure for the Dominican Republic is 31.3 percent. Indeed, based on the data presented in Table 14, one would be hard pressed to separate the good programs from the bad, unless "good" was defined as a low cost per acceptor and this would be an erroneous definition.

The second point made in Table 14 for which there should be little dispute is that family planning programs are expensive. While expensive is a relative term, when one considers that the cost figures are for acceptors, not users, and that many of the countries listed are not renowned for their successful family planning program, then one should get a feel for the monetary requirements for alleviating the population problem.

The cost per CYP has one of the same drawbacks as cost per acceptor because it does not measure the extent of contraceptive use in a country or program. But, it does have the advantage over cost per acceptor because it gives an indication of what inputs are required to maintain an active user for one year. The cost per CYP reinforces the point made earlier that the amount of resources currently being directed to the population problem are grossly inadequate. For example, Robinson found that the average cost per CYP for 28 countries in 1971 dollars was $56.40. He noted that this "Is considerably higher than is generally thought.."*

* W. C. Robinson, "The Cost Per Unit of Family Planning Services," J. Biosoc. Sci., Vol. 11, pp. 93-103, 1979.

In Table 15, we see two sets of cost per CYP calculated by different CRL personnel. Besides showing that cost analysis carries a lot of subjective baggage, Table 15 again points out the danger of using only cost per CPY as a measure of cost-effectiveness. The cost figures in the table include only service delivery costs and, therefore, are somewhat lower than the actual cost. However, this still allows one to compare the relative effectiveness of the different interventions. If one were to look only at the cost per CYP, then intervention "A" (Household Distribution of Pills and Condoms) would clearly be the most cost-effective. However, also given in Table 15 are the levels of contraceptive prevalence reached for each type of intervention. While the cost per CYP for Intervention "D" (All Family Planning Methods with Upgraded Field Staff and MCH Services) is substantially higher than "A" ($2.30 or $4.25 versus $6.70 or $6.91), the contraceptive prevalence experienced under "D" is also much higher, 13 versus 36 percent. Using the rule of thumb that a 2 to 6 percent increase in prevalence* results in a reduction of one point in the crude birth rate, the cost-effectiveness of intervention "D" is obviously superior to "A". With "A", the reduction would be from 2 to 6 points, while with "D", the reduction would be from 6 to 18 points.

The output measure one chooses can be misleading. In the above and in earlier examples, one could identify programs that were efficient in terms of providing services to a small percent of the population, but ineffective demographically.

d. Replicability: The main purpose of the Operations Research program is to develop and test family planning delivery systems that are sufficiently cost-effective to allow them to be replicated nationally. In other words, the system must not only be demographically effective, but be within the wherewithal of the host country government. While none of the Operations Research projects have been replicated on a national basis to date (Nicaragua started nationally) the data we have to date suggests that monetary considerations should not prevent national replication if the host country governments and international donors are sufficiently committed to the resolution of the population problem. Indeed, the financial resources are most likely less problematic than the organizational and personnel resources that must accompany the funds. Two examples of what it will cost to undertake a national replication are discussed below.

Earlier we saw that a contraceptive prevalence of 36 percent was reached in Matlab at a service cost of approximately $6.90 per CYP. If this system could be replicated nationally and have the same results, it would cost in the neighborhood of $30,000,000. This amount could, of course, be budgeted over a number of years

* D. L. Nortman and E. Hofstatter, Population and Family Planning Programs: A Population Council Fact Book, N.Y., N. Y., 1978, pp. 90-91.

and would be somewhat additive to the existing GOB family planning budget, which in 1976 was $14.4 million from all sources. One cannot state how additive a national replication would be since some of the currently committed funds could undoubtedly be applied to a national distribution program. In addition, there would have to be a greater expenditure for contraceptives, most likely in the neighborhood of $12 million for the first two years of the program. Assuming that a national program would take two years to complete, a rough estimate of the amount of funds required would be $70,000,000. However, this figure is obviously a gross estimate and, unfortunately, it is unlikely that the Matlab experience could be replicated on a national scale and have comparable results. What is more likely to happen is that some form of household distribution would occur which would cost much less, but result in a much lower contraceptive prevalence.

Similar and, perhaps, more realistic computations were made for replicating the 38-village distribution system throughout rural Egypt. Here there do not appear to be any monetary, organizational, or personnel barriers that could not be surmounted. The 38-village study was essentially an OC household distribution delivery system which resulted in an increase of contraceptive prevalence from 19 to almost 28 percent. Extrapolating the service cost (exlcuding contraceptives) for this project to the rural population, it was estimated that $30 million would be required over a three year period to cover the entire rural population. An additional $5 million would be required for contraceptive commodities.

In the case of Egypt, there are no plans for replicating the 38-village delivery system. A modified delivery system is now being tested which has a much broader contraceptive mix, plus health and community development components. While the monetary inputs for this delivery system are much higher than the 38-village study, it is anticipated that the impact of this system will be much greater.

Conclusion: The Operations Research projects have shown that household and village-based delivery systems require an initial investment which is substantially higher than that being made by most developing countries. Although these initial investments are relatively high, they result in comparable or lower cost-effectiveness ratios for such outputs as cost per acceptor. However, it was noted that a more meaningful way to examine these delivery systems is in terms of their replicability cost as a functi of projected contraceptive prevalence. While the cost of national replica tion is not insignificant, it does seem to be within the resources of the developing world and the donor community. There are two important caveats to this conclusion. First, a national program must attain comparable leve of contraceptive use as that experienced in demonstration areas. Second, after the initial monetary front loading, the cost of maintaining the delivery system will be substantially reduced in subsequent years.

NEW ACTIVITIES

In this final section, new project activities will be described in some detail. The time period covered is from FY 79 through FY 84. For this period of time, a total budget of $45.8 million is presented in Table 16. The new activities are described under three headings: I. Active Projects and Subprojects; II. Planned New Subprojects; and III. Potential Subprojects. Project descriptions under subsections I and II are fairly detailed and more information can be supplied for those desiring more information. The projects described follow the same order as that presented in Table 16.

I. ACTIVE PROJECTS AND SUBPROJECTS

Nine ongoing projects are being considered for funding during FY 79 or longer under the Project 0632. Of these projects, all but one have been described in the preceding section and, therefore, will not be discussed in this section. The one project that was not discussed is "Operations Research for Family Planning Programs." This project is currently being funded under Project 0855. In order to consolidate all OR and related projects under one funding authority, it is proposed that the future activities now subsumed under Project 0855 be transferred to Project 0632. This change should make monitoring and documentation easier and more effective. Before discussing this project, brief mention should be made of two other projects examined earlier that it is desired be consolidated under Project 0632.

MATLAB CONTRACEPTIVE DISTRIBUTION STUDY: Bangladesh

Status: The various data sets produced under this project are not only extensive but represent some of the most important and exciting data in the field of population. This is due to the study design, which makes the project one of the few actual field experiments, and the potential to link program input and output data with the unique vital events data the Cholera Research Laboratory (CRL) has been collecting over the last decade or so.

While this activity has been listed under "active" projects, the contract that funded this project (pha-C-1105) did, in fact, expire September 30, 1978. During the latter part of FY 78, it was the intention of the CRL and AID/W to extend the project for several years and the CRL submitted a proposal to effect this extension. The basic reason for the lack of an extension concerned differences between AID/W and the CRL on technical design issues. The Mission shared AID/W's position and the CRL withdrew its proposal.

The CRL is currently undergoing organizational changes and has also experienced major personnel changes. There is still a great deal of data that was collected under contract pha-C-1105 which remain unanalyzed. The CRL's administration appreciates the commitment it made to analyze these data and fully intends to eventually complete their analysis. However, because of the importance of the Matlab experience, an evaluation team of three persons (two outside AID) will assess the Matlab study with special emphasis on the

CRL's present analytical plan and schedule. If the team recommends that the data warrant greater and/or more timely attention than is presently planned, a subproject under Project 0632 would be initiated for the analysis of the Matlab data.

Design: The details of the analytical design, if any, should await the results of the evaluation of the Matlab project, which is scheduled for May 1979.

RESEARCH ON LOW-COST CONTRACEPTIVE DISTRIBUTION IN RURAL AREAS: Korea *

Status: Although this project was initiated in 1975, its first year was funded through USAID/Seoul funds. The Project Paper for this contract (Project 0617), which was initiated in 1976, outlined an optional fourth year if an "after" survey was approved for the project. The go/no-go decision for the after survey was based on service statistics. If it was decided that the intervention had suffient success to require more analysis, the after survey was approved. From earlier discussions, it is obvious that the "after" survey was approved. The funds allocated in 1979 ($150,000) are for the analysis of this survey and to provide technical assistance for the project, especially national expansion plans that are currently reviewed by the GOK.

Design: There are no changes from the original study design, which was outlined earlier.

OPERATIONS RESEARCH FOR FAMILY PLANNING PROGRAMS: Worldwide

Status: Specific OR activities which have been carried out under this project have been described in the last section. Moreover, planned projects that involve Columbia University will be discussed in the following subsection. Here, the past and future core activities of this project will be outlined.

This proposed subgrant will be for the period July 1, 1979, through June 30, 1984, with funding in annual increments. The scheduled funding levels are shown in Table 16. The basis for the proposed subproject has been established by prior activities under the Project Paper 0855 and its sole contract, AID/pha-C-1107, "Operations Research for Family Planning Programs," with the Center for Population and Family Health of Columbia University (Center). This contract was intiated in 1975 and terminates September 30, 1979. The total obligations to this contract are $3,470,000.

Under this project, the Center was given the following Statement of Work:

> (1) "The Contractor shall develop, implement, and provide technical support to operational research projects focusing on specific problems in LDCs. A worldwide scope shall be maintained; however, . . . the major part of these efforts will be directed toward Latin American countries . . . the Contractor will collaborate closely with host

* Since the Agency-wide review, it was decided to extend the life of the project. Therefore no funding under Project 0632 will be used.

> country officials and research dolleagues . . . . In addition to carrying out research projects, the Contractor will provide consultative support for research at the operational level in LDCs", and (2) ". . . . The staff shall travel overseas as necessary to develop new projects or implement previously designed operational research protocols. The Contractor shall respond to requests from LDCs or AID/W for consultations and to conduct operational research for specific problems."

This workscope was amended in 1977 to permit the deployment of three Center Regional Representatives referred to as Resident Advisors (located in Thailand, Haiti, and Colombia). These advisors have performed admirably well and have established the Center's credibility as a reliable source of resident technical assistance for developing country national programs.

The Center was originally awarded this Contract on the basis of sole source, predominant capabilities. This judgment, in turn, was based on (1) a unique multidisciplinary, multilingual staff composition, (2) the extensive experience of this group of family planning program evaluation and operations research in Asia, Latin America, and Africa, (3) impressive output of widely read publications of family planning programs and research; and (4) demonstrated prior responsiveness to the needs of AID/W and many USAIDs abroad. The Center presented a combination of effective collaboration with AID and practical scientific output.

In December, 1978, an intensive team evaluation of the Contract generated a series of observations, among which the four following are relevant (from Draft Report, 12/12/78):

> 1. "CBFH (Center) has met or exceeded all conditions of the Contract in a completely satisfactory manner."
>
> 2. "PL 95-224 and OMB's regulations (Federal Register, Vol. 43, No. 161, pp. 36860-36865) imply that the Contract mechanism is inappropriate for further assistance to the Center. The Grant seems to be the most appropriate mechanism."
>
> 3. "The team recommends that CBFH (Center) be funded through a three-year specific support Grant funded annually in advance."
>
> 4. "Over the past four years CPFH (Center) has increased the predominance of its capability for assistance to other countries as demonstrated both by the professionally talented, multilingual, multidisciplinary staff and the staff's high motivation to be sensitive to host nationals and their genuine caring for the welfare of the people . . . ."

The evaluation team's final report was submitted in March, after additional site visits were made to two developing countries where the Center is active.

Design: The objectives and strategies of the proposed project are outlined below.

A. Project Objectives: The purposes of this activity are as follows:

1. To provide technical assistance to developing countries to initiate public and private sector family planning programs, or to solve operational problems in existing programs with specific focus upon non-clinical, community-based service delivery, to also include technical resources for programs that involve maternal/child health and/or basic public health.

2. To provide subgrant funding support to implement operations research towards testing delivery system components and otherwise overcoming impediments to more efficient and cost-effective service delivery, with special focus upon (a) urban slum and poor rural areas, and (b) Sub-Saharan Africa.

3. To improve developing country capabilities for internal management of program operations research, and the availability of information about international experience.

B. Project Strategy:

1. Technical Assistance

a. To identify needs for and to provide short-term technical assistance to developing country (LDC) public or private sector program mangers for the improvement of components of family planning delivery systems, and/or for the design of new systems. This assistance will concentrate on the areas of: information/record systems, data analysis and experimental design, community agent identification and training, public health/epidemiology, management and program coordination.

b. To provide resident technical advisors to national programs in Haiti, Thailand, and approximately three additional countries, with emphasis on the Sub-Saharan Africa region.

c. To assist AID/DS and local USAID Missions in identifying promising family planning or family planning/basic health initiatives in developing countries, occasionally to entail short-term assistance to local Missions in preparation of bilateral programs for community-based service delivery.

2. Subgrant Support:

a. To assume responsibility for subgrant support and short-term technical assistance as necessary to programs initiated previously

under Contract AID/pha-C-1107 in (1) Brazil, (2) Guatemala, and (3) Nigeria. These projects are described in this PP in the Country Summaries.

b. To develop approximately five (5) new subgrant activities for directly supporting implementation of operations research on family planning or family planning/basic health service delivery. Emphasis will be upon non-clinical, community-based systems with special focus on both anglophone and francophone countries of Sub-Saharan Africa. The strategy is for these operations research projects to evolve towards programs to be supported by U.S. bilateral or multilateral donor assistance within two to three years.

3. Information and Training:

a. To assume responsibility for technical literature library indexing and information retrieval in the field of family planning and basic health program evaluation and operations research, to be integrated with the multicenter computerized population information system, POPINFORM (now active under AID/pha-C-1107).

b. To provide occasional short-term training, at the grantee's headquarters, for developing country technicians in the fields of program design, management, and evaluation, especially as such training complements other assistance activities of the grantee in specific countries.

c. To assist AID/DS and AID/Africa Bureau in the development (but not the implementation) of an African Regional Conference on community-based family planning programs, probably to be held during the third year of the Grant.

d. To produce and disseminate (publish or otherwise distribute) results of technical analyses of operations research performed under this Grant.

An effective, responsive organization for LDC assistance in operations research requires a mixture of technical resources, one which minimally spans the range of disciplines involved in family planning and basic health delivery: obstetrics/gynecology, pediatrics, nursing, nutrition, tropical medicine, infectious diseases, sociology/anthropology, econimics, education, and even law. To respond effectively, a staff must have had considerable overseas experience as well as capabilities in major non-English official languages (especially Spanish and French). These prerequisites are not easily found within the cadre of available AID direct-hire personnel, necessitating outside contract or grant support. The Center staff and its collaborating, adjunct professionals within the Columbia University Schools of Medicine and Public Health provide an unmatched resource of multilingual, multidisciplinary experts.

II. PLANNED NEW PROJECTS

Of the 10 Planned New Projects, formal or informal proposals have been received for eight of them. Thus, during FY 79, there will be a major increase of OR projects sponsored by the Agency. Much of the planning for these planned projects was done during the last Fiscal Year.

These new actions represent a shift in the type of OR projects funded. Of the eight proposals which have been received, seven are for projects which will test delivery systems. Of these, six have health components. It is anticipated that most future OR projects will have health components as a result of the family planning/health policies of the respective host countries. The other major shift concerns the type of delivery system to be tested.

For completed and ongoing projects, household distribution was the dominant delivery system. Of the seven proposals received, only three intend to have household delivery systems. The village-based delivery systems will, in most instances, include the direct delivery of services to households. However, there will be no attempt to systematically visit every household in the catchment populations. On the other hand, household distribution projects have as an important facet in their design the canvassing of all households in their catchment populations. Then, after this initial distribution, the resupply system is the same as found in village-based distribution projects.

It is too early to tell if one should be concerned about the trend away from household distribution projects. It is difficult to compare the relative effectiveness of household versus village-based distribution systems. The former will obviously have more dramatic results at a much earlier time than village based programs due to the household distribution system's more aggressive and systematic intervention. Yet, over time, the village-based distribution systems might reach a comparable level of outputs with less financial and programmatic inputs. As more experience is gained with both types of delivery systems, it should be possible to delineate the strengths and weaknesses of each system.

There is no single reason why there are more village-based than household distribution projects planned. In some instances, such as the BEMFAM project, the existing system is village-based and Brazilians do not desire to change the basic system, even though it would be interesting to compare household distribution with the village-based system. In most other cases, the considerations not to have household distribution concern the organizational capabilities of the host country and the "radicalness" of household distribution.

During this Fiscal Year, two OR projects are planned for Africa. The success or failure of these projects will undoubtedly influence the degree of success which will be experienced in initiating other OR projects in Africa.

With the exception of the Nigerian project (with a study population of 20,000), the planned projects have quite large study populations. While one project which builds on an ongoing activity has an extremely large study population of 18.5 million, the other remaining projects have an aggregate study population of almost 1.2 million. These larger populations will make the projects more difficult to initiate than those with smaller study populations, but will allow the more realistic testing of such things as logistical networks, supervisory issues, and training programs.

FAMILY HEALTH PROJECT: Guatemala

Status: A formal proposal has been received from PAHO/INCAP. The proposal has been reviewed and approved. Since this project will be jointly funded by the Offices of Health, Nutrition, and Population, the contract negotiations cannot be started until the funding mechanisms are finalized. Also, PAHO/INCAP must have a formal working agreement with the Ministry of Health before the contract can be signed. If these two items are resolved, the project can be formalized. The project will be monitored by DS/POP/R and a Project Steering Committee consisting of a representative from Nutrition, Health, and the Latin America Bureau. The project is for two years.

Design: The project study population is 75,000 of which 8,000 are Indians. In addition, there will be a control population for the Ladino population. The rural Indigenous communities will serve primarily as a case study.

The intervention will consist of family planning, health, nutrition, and community development. The family planning component will entail the household distribution of OCs, condoms, and Neosampoons. There will also be referral for IUDs and sterilization. The health component will focus on reducing maternal, infant, and child mortality. The emphasis will be on the identification of problem pregnancies, upgrading deliveries, oral rehydration, and immunization. The nutrition component will concentrate on clinically obvious cases of protein-calorie malnutrition. In terms of community development, the project will have catalytic and facilitating functions. They will encourage community committees to develop projects that will benefit the residents and then assist them in obtaining the necessary technical and physical resources to implement the projects. In addition to the above, the intervention will have a health and nutrition education component.

The evaluation will consist of before and after measures of contraceptive behavior, health and nutrition status, and community activities. The emphasis on health will be infant mortality. There will also be a great deal of attention on process variables, e.g., percent of the population immunized. These latter variables will allow one to estimate the effectiveness of the intervention within the life of the project. If the project is extended beyond a two-year period in order to replicate the intervention in a larger population, it will be possible to measure changes in fertility and to get more definitive measures of changes in mortality. There is a go/no go decision point for Phase II of the project in the project month 18.

OPERATIONS RESEARCH: Brazil

Status: An informal proposal has been received from Columbia University and BEMFAM. A formal proposal has been received and is being processed.

Initially, the project is for a two-year period. However, funds are being budgeted for subsequent years in order to follow through with replication and expansion if this action is warranted.

Design: This project builds on an IPPF/Western Hemisphere project. Under this earlier project, BEMFAM has established an extensive network of volunteer distributors who distribute OCs free. These distributors are supervised by physicians. The volunteers do not receive any economic incentive. As part of this project, all the methods legal in Brazil will be introduced in areas that now have village-based BEMFAM distributors. The methods to be introduced are: condom, vaginal tablets, IUDs, and diaphrams. The last two methods will be provided at clinics after referral by distributors. Special training will be given to distributors and physicians for these new methods. The catchment population for this population is 18,500,000.

While the above intervention will consist of building on an existing community-based distribution program, an additional area that has virtually no organized family planning effort will have a comprehensive community-based distribution program introduced. This area has a population of 2.2 million.

BEMFAM also intends to experiment with the use of the family planning delivery system as a distribution system for antihelminthics. This effort, however, will be on a small scale.

There will also be attempts made to improve the general evaluation capability of BEMFAM. Considering the fact that the BEMFAM program is currently dealing with a widely dispersed population which has an aggregate population larger than most developing countries, the need to establish an on-going evaluation capability is understandable. For this project, the evaluation will consist of the analysis of cost data, service statistics, and data generated through before/after surveys.

One variable that is still being discussed is the inclusion of a small test to determine if the productivity of distributors can be increased if they are given some monetary compensation for their work, most likely through the sale of contraceptives. At this juncture, it appears that this type of intervention is not acceptable to the Brazilians.

COMMUNITY-BASED MATERNAL/CHILD HEALTH AND FAMILY PLANNING: Peru

Status: In October, 1978, DS/POP/R received a proposal—through the Center for Population and Family Health (Columbia University)—from the Government of Peru, Sur Medio Health Region. This proposal has been reviewed by USAID/Lima, DS/POP, and LA/DR. Design and budget modifications sufficient for reservation of first-year funding to USAID/L have been negotiated. A ProAg has been drafted (Spanish/English) and a draft of the PIO/T for reservation will be before the DAA/DS by mid-

December. It is expected that this three year investigation will be initiated in February, 1979, by the Ministry of Health.

Design: Sur Medio Health Region comprises three large sub-districts whose total population is about 700,000. Most of these people are resident in rural areas; many live in remote highland areas and are without community availability of any family planning or basic health services. Peru presents an unusually intense profile of health and fertility problems in its rural areas, including in recent months mounting cases of frank starvation. Implementation of this project by the Regional Ministry will extend a set of basic services to include: (1) improved maternal/child health within marital unions (child spacing) by meeting existing demands for contraceptives, (2) improved nutrition practices for infants and mothers, improved access to treatment for intestinal parasites, some efforts to improve basic food distribution within and across communities, and provision of electrolyte rehydration treatment for infant diarrhea, and (3) community-level provision of standard immunization series (special emphasis upon tetanus toxoid immunization for pregnant women.

The existing health infrastructure will be strengthened by short training and logistic/commodity supply support. In two of the three sub-areas local communities will identify volunteer agents who will provide simple services for small fees, strengthen the vital registration system, and attempt to provide early referrals to clinics (especially for perinatals and clinical family planning methods). In the first year, approximately 1000 such agents will be trained and deployed with basic health commodities (oral contraceptives, foaming tablets, condoms, oral rehydration mixture, intestinal parasite treatment, aspirins, and perhaps multi-vitamins). The operational research phase of the project will end within three years, by the end of which time it is expected that a total of 1500 to 1700 agents will be in the field. In the interim it is expected that empirical contrasts of the comparative cost-effectiveness of the systems, with an without community agents, will provide a sound basis for decisions about the long-term importance of the community agent system for improving and sustaining higher standards of public health in rural areas.

A resident advisor from Columbia University will assist the Ministry in the implementation of the Sur Medio delivery research and also work with other regional health directors towards implementation of similar program in other areas.

Assessment of impact will focus upon: (1) changes in community prevalence of use of all methods, (2) changes in age-specific pregnancy or fertility rates, and of fertility regulation, (3) estimates of decline in infant deaths due to diarrheas. Hopefully, the evaluation will also permit: (1) statistical evidence of an improved pattern of child spacing,

and (2) evidence of improved nutritional status and decline in prevalence of intestinal parasites.

Evaluation measurement will be based upon vital registration, service contact, and logistic/commodity records, and probability sample surveys (the latter in 1979, 1980, and 1981.) It should be mentioned that other resources previously scheduled for Peru during this time period (1979 thru 1981) by DS/POP for improvement of demographic measurement (Contraceptive Prevalence Survey and Improving Vital Registration) will verly likely now include specific focus upon the Sur Medio region, thereby complimenting this AID assistance while also meeting their other objectives.

There is in Peru a recent and--in our experience--an intense interest in making family planning services readily available to the indigenous population in the near future. This Sur Medio project is already providing an influential model, being used by the directors of three other Health Regions in Peru (all larger than Sur Medio) for their own designs of low-cost, combined delivery systems. It is expected that the key outputs of this project--aside from empirical delivery of services to a large population--will be the unusual focus upon evaluation of cost-effectiveness of key elements of the system. Sur Medio will likely become the weather vane for community-based public health delivery in Peru.

COMMUNITY BASED DISTRIBUTION: Nigeria

Status: A formal proposal has been received and reviewed from Columbia University and the University of Ibadan. It is estimated that Columbia University will have a subcontract with the university sometime in January for this three year project.

Design: This is a village based family planning/MCH project. It will build on the existing rural health infrastructure which is minimal in its penetration of rural areas but seems to be better developed in the study area. It is estimated that the study area has a population of about 20,000.

Government trained midwives will be recruited and trained in the areas of family planning and MCH. Altogether, 5 midwives will be selected. These individuals have already been identified. In addition to technical skills concerning services to be provided under the system, the midwives will also receive training in supervision and training.

Services at the village level will be provided by locally recruited TBAs. These individuals will receive special training in the areas of family planning and MCH. Although University of Ibadan personnel will participate in the training, the bulk of the training and all the supervisory responsibilities will rest with the government midwives, who will be paid by the project. Each midwife will be responsible for 10 village agents.

The services to be offered are extensive in the Nigerian context. The following fertility regulation methods will be offered: OCs, condoms, vaginal tablets, Depo-provera, IUDs, and sterilization. The last three methods will be provided through referrals. For referral methods, TBAs will receive a "bonus" of some in-kind item for so many referrals. There will be a charge for commodities that the TBAs distribute themselves.

Each TBA will receive a kit that will include, in addition to the above contraceptives, health and obstetric items. The latter is similar to other kits developed for midwives. The health kit will include oral rehydration salts, broad spectrum antihelminthic, shloqoquine, antihistamine tablets, and a small variety of first-aid items. There will be a charge for the health items sold and the obsteric services provided. In addition to in-kind bonuses for contraceptive referrals, a system of bonuses will be established for referrals in other activities, e.g., participation in immunization campaign. The actual monetary value of the bonuses will be quite small. Except for a per diem during their training period, the TBAs will not receive a salary.

The TBAs will be directed to systematically visit each household. However, unlike other household distribution projects, they will not be paid for this distribution nor will they have specific canvassing assignments. Because the project lacks a systematic canvassing design, it is doubtful that there will actually be a household canvass.

Presently, it has been proposed to compare the intensity of supervision. This would be accomplished by comparing midwives who were assigned from four to five TBAs to supervise with those who were assigned 15. While this is an interesting question which has definite programmatic implications, it is unlikely that any clear finding will result from this comparison for methodological reasons. To give only one problem, there are only five supervisors and 50 field workers. The number of cases for analysis is too small to undertake any meaningful statistical analysis. However, the experiential information might prove valuable if a replication of the system to a larger population is warranted. One could examine this issue with more cases. The inclusion of this variable is still being discussed.

A more straight forward variable will be included in the study. One half of the villages will be charged one price schedule for commodities and services and the other half will be charged slightly higher prices. This will have programmatic and policy implications.

The delivery systems will be evaluated in terms of their cost-effectiveness through the analysis of cost data, service statistics, and before/after surveys.

PRIMARY MCH AND FAMILY PLANNING: The Sudan

Status: A draft proposal has been received for this 3-year project ("Developing, Testing, and Demonstrating the Community Based Delivery of Family Planning and Family Health Services in Sudanese Villages," October, 1978). This proposal was submitted by the Department of Community Health, Faculty of Medicine, University of Khartoum and the Center for Population and Family Health, Columbia University. It is anticipated that a formal proposal will be submitted sometime in February, 1979. The project will be done in collaboration with the Ministries of Health and Social Affairs.

Design: The design will consist of a before/after measurement of change in contraceptive behavior and simple health indicators over an approximately two-year period. The study site is in Gezira Province. As presently proposed, the study population will consist of 50 villages containing a population of approximately 100,000.

Two delivery systems will be tested and compared. The first will consist of household distribution of OCs and referral for IUDs. Services will be provided by Government personnel, namely, health visitors and village midwives. The latter are not traditional birth attendants, but women who have received special training on midwifery. As part of this project, they will be trained to insert IUDs. In addition, the health visitors and midwives will participate in nutritional and health educational efforts. In terms of actual services, the intervention will concentrate on infant diarrhea, respiratory infection, and parasitic diseases. The details of the health intervention have not been decided.

The second model entails a slight variation of the existing program. Here, family planning services will not be provided at the household level. Instead, the fieldworkers will refer women to the local health dispensary where a medical assistant will prescribe OCs or arrange for an IUD insertion. Under this intervention, the role of the fieldworkers will be motivational.

Although the proposed project is for a three-year period, funds are budgeted for a six-year period in order to replicate the effort in a larger population if the initial study warrants such an action.

FAMILY PLANNING AND CHILD NUTRITION EXPERIMENT: The Philippines

An informal Proposal has been received for this project from Pennsylvania State University and the Cebu Institute of Medicine. The proposal has not been fully reviewed by all relevant parts of the agency. USAID/ Manila's comments have been solicited. If these are positive, a formal proposal will be requested. The proposed project is for three years.

Design: The proposed project has an experimental design which would compare the cost-effectiveness of three different types of intervention: household distribution, community participation, and clinic-based system with outreach. The latter system would be the existing family planning program and, in effect, would serve as a control. Six comparable municipalities in Cebu with populations of from 20,000 to 40,000 would constitute the study population. The communities would be randomly assigned to one of the interventions with two communities for each intervention. The first intervention would consist of household distribution and would follow the systematic distribution system carried out in Korea, Egypt, etc. The second intervention would entail active family planning users participating in a quarterly drawing of rice or corn. And, the third would simply be the on-going national family planning program. The community participation intervention would seek to use the lotteries as a reinforcement of contraceptive behavior. No special effort would be made to recruit new acceptors, the hypothesis being that satisfied users and the community lottery would attract new users. Morover, it is hypothesized that this intervention would increase the continuation rate.

The project would be evaluated through the analysis before/after surveys, service statistics, and cost data.

COMMUNITY BASED DELIVERY OF HEALTH AND FAMILY PLANNING SERVICES IN RURAL GUATEMALA: Guatemala

Status: A draft proposal for this 25 month project has been received from the Division of Human Resources, Ministry of Health (November, 1978) and reviewed by DS-POP/R. It is anticipated that a formal proposal will be submitted in January. The project will be carried out by the Ministry of Health. Currently, it is planned that the funding mechanism for the project will be through USAID/Guatemala.

Design: The proposed study has a before/after study design that will measure the impact of from 12 to 16 months exposure to the intervention. The study population will be approximately 120,000.

The central feature of this project would be the use of "volunteer" Promotors. These individuals would be selected from villages in the study area and receive special training. One of the objectives of this project is to compare two types of training modalities.

The first type of training would be primarily the responsibility of five Tecnicos de Salud Rural (RSR). Half of the project's Promotors (200) will receive a four-week training course on family planning, and simple health interventions, and health and nutrition information. The Promotors will also serve as referral points. The family planning component will consist of selling OCs, condoms, and Neo-sampoons. Also, referrals will be made for IUDs and sterilizations. The health intervention will concentrate on oral rehydration, parasite infestation, and simple first

aid. As with the family planning commodities, these services will be sold. There will also be a nutritional survey of the study population to identify gross malnutrition among infants and children by mid-arm circumference and weight measurements.

In terms of the intervention, the second group of Promotors will provide the same services as the first. However, these 200 Promotors will receive a three-week training course which will rely heavily on the use of a programmed learning manual that will be developed as part of this project. The different training programs will be measured in terms of cost, objective tests given to trainees, and most importantly, performance.

There are a number of key features to this project which, if it is effective, will greatly increase the probability of national replication. First, the ratio of Promotor to population is quite favorable 1:300. Second, the TSRs are already part of the government program. Twenty-five TSRs will serve as supervisors to the Promotors. Here too, the ratio is reasonable 1:25. Third, the major increase in cost to the Government is training of the Promotors. Promotors will not receive a salary. Instead, they will retain a commission for the sale of family planning health items with the remainder going into a special account to purchase additional commodities. The price of the commodities to the clients have not yet been decided, but will be kept low. Additional funds will be necessary to supplement the purchase of commodities. The crucial question for this project is the degree of activism one can generate from the Promotors. If they adopt a passive role, then the intervention will have a marginal impact. If, on the other hand, they actively visit households in their catchment area, the project would result in a very cost-effective delivery system. A great deal of emphasis is being placed on the supervisory function of the TSRs. They will encourage the Promotors to visit all households in their catchment population. However, since the project does not have a built-in systematic canvass of all households, it should be considered a village-based program.

An additional $50,000 is budgeted for FY 80 to insure that all the data generated by the study will be analyzed.

LATIN AMERICA OPERATIONS RESEARCH MEETING: Mexico

Status: Discussions have been held with the Government of Mexico concerning its sponsorship of the proposed meeting. The GOM has agreed to sponsoring the meeting. Technical assistance and financial support for this project would be under an existing contract with Development Associates. A draft proposal has been received and a formal proposal is anticipated in December, 1978. The project would be for nine months.

Design: The Mexican meeting would be preceded by two regional workshops. These would be primarily for mid-level administrators from countries

that do not currently have community-based or contraceptive retail sales programs, but have expressed some interest in developing such programs. These individuals would discuss on-going programs with the project directors. The emphasis for the workshops would be the exchange of ideas and the development of leads for future projects. Tentative sites for these workshops are Guatemala and Colombia.

The Mexican meeting would be for senior administrators. The meeting would consist of presentations describing major programs in Latin America and panel discussions which would focus on country-specific issues of the participants. The actual meeting would be kept short, 2 and a half days. The GOM will arrange for site-visits after the meeting.

COMMUNITY BASED DISTRIBUTION: Paraguay

Status: The Mission has requested assistance in the development of an OR project. The Government of Paraguay has expressed interest in starting a community-based program in the rural areas. A staff member is scheduled to go to Paraguay in January, 1979, to design a research protocol. At this time, it is not clear if this project would be supported under this project or under the bilateral program. In either case, it is anticipated that POP/Research would provide technical assistance.

Design: Obviously, the project design has not yet been finalized. However, it is likely to be conceptually similar to that found in the Nigeria or Peru project.

OPERATIONS RESEARCH IN FAMILY PLANNING: Mexico

Status: There have been a number of discussions with GOM and Monterrey Institute of Technology staff concerning a project that would examine the operations of family planning programs and to test programmatic modifications to make the programs more effective and/or efficient. There is a great deal of enthusiasm on the Mexicans' part for this project. The restraining factor is making sufficient staff time available to assist in developing a protocol. It is hoped that a project can be designed and formalized late in FY 1979.

Design: The design for this project has not been decided upon. However, it will focus on program-specific variables and will include such things as the utilization of different types of staff for the same activity, comparing various types of outreach efforts, and examining different kinds of referral systems for sterilization. In short, this project would not test an entire delivery system, but components of existing systems.

III. POTENTIAL PROJECTS

At this time, it is difficult to project what OR activities will be undertaken in FY 80, the year during which most of the activities discussed in this section will be intitiated. From the list of projects shown in Table 16 one can see at a glance that a major effort is anticipated in Africa, the one region that, to date, has no OR projects. However, before discussing the potential projects it is appropriate here to digress somewhat by outlining some of the constraints which are presently impeding the continued growth of the Office's OR program. Some of the proposed potential projects are designed to alleviate these contraints.

CONSTRAINTS: There are a number of factors that should be kept in mind when discussing the OR project. For some factors, it is possible to be quite specific about the ways in which the OR program will be impeded. With others, however, it is difficult to predict what their influence will be in FY 80. Here, the following issues will be discussed: staffing pattern, the Division's mandate, the type of OR projects, and travel funds.

1. Staffing: The staffing pattern of the Research Division has remained essentially the same for the last 5 years. However, this year was the first time that all positions were encumbered with 7 full-time professionals, one part-time professional, and 3 secretarial/clerical. The part-time professional position recently became vacant. Although the staffing pattern of the division has remained static, the OR program has grown dramatically in the last several years. In 1976, there were 9 active OR projects. In 1978 there were 15. During 1979, it is anticipated that there will be from 25 to 27 active projects.

2. Research Division Mandate: The Division's OR activities constitute only part of the Division's activities. It is important to remember that slightly over half (52 percent) of the Division's budget is devoted to what can be broadly termed as bio-medical research. In addition, the Division is responsible for the technical monitoring of the Population Information Program and the bio-medical component of the Population Council's grant. At this time, it is unclear what, if any, role the Division will play in terms of the Agency's contribution to WHO's Expanded Research Programme. The point here is that the aggregate time the Divison has for OR activities is not as great as may be thought. While the OR projects have more visibility than bio-medical projects, the latter also require a substantial amount of staff time. This is highlighted by the following estimates of the amount of staff time devoted to these areas for FY 77. The estimates assume that Dr. Heiby worked the entire year.

Staff	Bio-medical Activities Person Months	OR Activities Person Months	Administrative Activities Person Months
Gillespie	2.4	4.8	4.8
Labbok	9.6	2.4	-
Shelton	9.6	2.4	-
Maguire	7.2	4.8	-
Mutchler	-	12.0	-
Merritt	.6	10.2	1.2
Prager (Part-time)	2.4	-	-
Heiby	1.8	10.2	-
	33.6	46.8	6.0
Percent of All Person Months	(39.0)	(54.1)	(6.9)

Thus, the professional staff time devoted to OR activities is more on the order of 4 person years rather than 7 person years.

3. Type of OR Project: Operations Research projects are very labor intensive. There are a number of reasons for this characteristic. First, unlike most research studies, OR projects involve the design and implementation of delivery systems. Second, the delivery systems represent an innovation for the particular country. This means that: the negotiations with host-country representatives, the gaining the cooperation of the local medical profession, the training of service staff, and the actual design of the intervention requires a great deal of time. Third, the research component of OR projects must, to a large extent, wait for the intervetnion to be formulated. Impact cannot be measured until one knows what behavior and/or conditions are being addressed through the intervention. Thus, there is usually a time lag from the time the intervention is decided upon and the work on such things as interview schedules can be initiated. Moreover, since each country usually has an individualized treatment intervention, the evaluation strategy must also be individualized. As a result, there is only limited material that can be drawn from earlier projects. Fourth, not only is the delivery system considered innovative, but also the research component. Often, the host country researchers have not had experience in action research projects. And, in some countries, there is only limited research expertise of any kind. Such research concepts as cost-effectiveness have proven particularly difficult to get accepted in OR projects. As a result, a great deal of time is required to arrive at a mutually agreeable research design. Fifth, related to the innovative delivery system point made earlier, the innovative nature of the intervention often entails obtaining fertility regulation technologies and health commodities that are not available in the country. For example,

laproscopic sterilization, Neo-sampoon, Oralyte and IUD kits are examples of training and commodities that have had to be obtained for an innovative intervention. Arranging for these items is very time consuming, indeed.

The above tasks become more time consuming as the intervention becomes more complex, the project more "radical," and the research capability of host countries more limited. It should be noted that for the proposed projects, almost all of them--if not all of them--will have a health component. The bulk of these new efforts will occur in countries with limited family planning experience and that experience will be in terms of clinic-based systems. Lastly, the research base in most of these countries will not be well developed. In short, one can anticipate that future OR projects will be more labor intensive than with past or on-going projects.

To give an indication of how labor intensive these projects can be, the data presented on page 36 shows that amount of person days that went into the development and monitoring of 5 OR projects. The data presented in this Table was compiled in May, 1977, and a great deal of care, and time, was taken to compute the amount of staff time that was allocated for these projects. While the time period covered is more than one year, the fact that 13.8 person months were used for 5 projects gives an indication of how thin the Division's staff is now stretched and how much thinner stretched they will be with up to 27 active projects during the latter part of 1979.

4. Travel: As shown in Table 17, OR projects require a great deal of TDY. Of the 255 person hours spent on the five projects, 41 percent were while staff was on TDY. This has been especially true in developing projects in countries without well-established family planning programs. For example, the project planned for Nigeria has required two trips to Nigeria, despite the fact that there were two visits to this country by key Nigerians involved in the project and that this project is building on contacts and relations established through other, earlier projects in Nigeria.

It is certain that the ability to professionally monitor existing projects and to develop new projects will not be possible unless there are adequate travel funds.

As has been noted earlier, it is planned to generate new initiatives in Africa. In terms of regional emphasis, Africa has the highest priority. However, the difficulty of establishing OR efforts is fully appreciated and the ability to effectively utilize the funds suggested in Table may be overly optimistic. At the same time, it should be remembered that several large OR projects could quickly utilize the funds allocated for Africa, especially since all African projects will have to have a health

component. In short, it is impossible to predict what the amount of funds required for Africa initiatives will be; the estimates given may be high or low, but they are unlikely to be correct.

The first two Potential Subprojects outlined below are designed, among other things, to alleviate the negative impact of the above constraints. As suggested in the discussion of these constraints, the span of control of the Research Division is now at a critical stage and will still be a serious problem even with the addition of one or two professional staff to the Division, which does not seem to be a likely in the foreseeable future.

EVALUATION OF COMMUNITY-BASED INTERVENTIONS

Status: There has been no documentation prepared for this project. The need for the project is great and, if one or more of the "Planned New Projects" does not become finalized during FY 79, an attempt to get this project started with FY 79 funds will be made. However, the availability of funds is not the only constraining factor. Most likely, this project would entail a Request for Proposals (RFP). Besides the staff time required to solicit proposals, there is a problem of timing. It would be necessary to start work on a RFP fairly soon; yet, it may not be certain when the final disposition of planned projects will be known.

Design: The Operations Research program really began in earnest during 1976, with the establishment of Project 0632. Now, as the older projects are being completed, the Agency is confronted with an assimilation problem. There is a great deal of information that has already been generated from existing projects, as illustrated in the bibliography. The full extent of information base available is not shown in the bibliography which excludes trip reports, progress reports, and various other types of documents. More important, there is a wealth of data that have not yet been fully analyzed. And, as the program grows, the data management, analysis, and dissemination capabilities of the Division will become more and more problematic.

With its present staffing pattern, the Research Division will not be able to due full justice to the data generated. Currently, the primary monitors of individual projects have a detailed knowledge of their projects, but there is lack of an overall understanding of all the OR experiences funded through the Research DIvision. Equally important, there is no group which has the capacity to collect and review the non-AID funded OR projects and the closely related Commercial Retail Sales programs. This lack of a broad information base became all too evident during the preparation of the recent overview of community-based distribution programs (Foreit, et al.: 1978) during which it was found that the Research Division had the most information about these various efforts. It is believed that the

Division's information base is presently inadequate and that it will, in any case, be difficult to maintain in the future. The specific tasks contemplated under this subproject are outlined below.

1. Coordination: The Research Division has, over the years, attempted to develop coordinating relationships with various other donor and intermediary groups. The most intensive effort was attempted with the Community-Based Distribution Department, IPPF, London. Perhaps the most effective relationship, however, has been developed with IPPF-Western Hemisphere. The latter relationship is not formal and is due primarily to the physical proximity of IPPF-Western Hemisphere offices, the close relationship with Columbia University and, most importantly, the network of Latin American professionals that have developed an ad hoc communication exchange. Under this project the contractor would establish lines of communication with other organizations involved in OR-type activities. These lines of communications would be two-way and, as a result, the contractor would provide information to the organizations that should provide information that will assist in planning and implementing their own programs. Examples of the organizations are: IPPF, FPIA, Pathfinder, UNFPA, PIACT, IFRP, Columbia University, and the functional equivalents of AID in developed countries.

2. Review of Programs: The contractor will develop "state-of-the-art" papers. This would be a major undertaking. It would constitute a comprehensive review of CBD activities. The review would focus on the identification of gaps in our knowledge and make specific recommendations for future programatic and research activities. Presently, two reviews are contemplated. The fist would concentrate on the general assessment of the community-based distribution approach. The second would examine specific programatic issues, such as training approaches for paramedical and lay personnel, charging policies, resupply systems, referral systems for clinical procedures, supervisory ratios, etc. These reviews are likely to entail the secondary analysis of data collected from completed OR studies. Therefore, the contractor should have programming and computer capabilities.

3. Cost-Analysis: One of the most important but neglected areas of family planning research is cost-effectiveness studies. As mentioned elsewhere, this analytical approach has not been widely accepted in the developing world and, where it has been accepted conceptually, has not been widely utilized. Under this project, a major emphasis will be to examine programs in terms of their cost-effectiveness.

This project is not envisioned as having a clearing house function which would involve a long-term project. The contractor would assist such programs as the Population Information Program, Johns Hopkins University, in establishing collection mechanisms for information, but it is assumed that the long-term collection and retrieval responsibilities would rest

with those organizations participating in the POPINFORM system. Nor is this project designed to carry out a continuous assessment of OR activities. Rather, it is designed to produce a comprehensive state-of-the-art position which, in turn, would lead to research and programatic leads to follow in the coming four or five years. As a result, it is not planned to have this project last for more than two years. However, the option to continue part of the functions outlined above should be kept open even though no funds beyond FY 81 are now planned. Specifically, the review of AID-sponsored research efforts, including secondary analysis of data, may be a capacity that the Agency wishes to retain. This decision could be made after the first year of the project.*

OPERATIONS RESEARCH COMPONENT RESEARCH, FAMILY PLANNING

The Operations Research program in AID is something of a misnomer. When starting the program, a number of titles were considered. The leading candidate was, in fact, "action research" which—perhaps—more accurately describes the existing OR programs. As the discussion makes clear thus far, almost all of our activities are designed to assess programatic actions which have entailed complete delivery systems. The American term "operations research" is derived from the British term Operational Research which, in turn, comes from a unit of the British Admiralty called Operational Research. During the Second World War, this unit undertook a variety of problem solving tasks. Perhaps its best known work involved the alleviation of sinkings in the Battle of the Atlantic. The problem the group faced was, of course, the high sinkings the Allies were experiencing. Through the analysis of these sinkings and conceptualizing the entire supply network as a system, this unit was able to develop an "optimal" convoy system that greatly alleviated the system. For instance, its analysis determined that there was little relationship between the size of a convoy and the number of ships sunk. A convoy of 60 ships was, during a wolf pack attack, likely to loose 16 ships. However, this was also the case of a 30 ship convoy. Thus, by reducing the number of small convoys, the percent of ships that made safe port was greatly increased. Also, the ratio of escort ships and planes to cargo ships was much more favorable. This is the grand problem and the grand solution. However, the Operational Research personnel had to contend with scores of small but critical problems before the overall result of less sinkings was attained. For instance, the building of corvettes had to be coordinated with the recruitment and training of crews; the convoy routes had to be determined in conjunction with the operational range of planes in Canada, Greenland, and the United Kingdom; the composition and disposition of convoys had to take into account the type of cargo the ships carried (food stuffs on the outside, troops and ammunition in the middle); destinations had to be based on such things as port and rail capacities; and so on.

At the risk of carrying this analogy too far and having the reader deep-six this document, most of our work has concentrated on the convoy with much less focus on the individual components of the system. With on-going

*A comprehensive evaluation of the project will be conducted in FY 81. The Office of Population will prepare an outline of the evaluation during the Fall, 1979.

projects, more attention has been given to individual components through such things as testing the charging policies, adding new services, and comparing resupply systems. This "tinkering" with the system, it is believed, has resulted in an overall improvement in the system. However, as more and more projects expand and--in some cases--become national in scope, the ability of Divisional staff to follow-through on modifications and testing of delivery systems becomes more difficult. The proposed project would provide the Agency with the capability to continue efforts to upgrade community-based distribution systems.

An equally important function of this project would be to respond to field requests for assistance. The Research Division has received a number of unsolicited requests for assistance designed to improve existing family planning programs. Because of the high priority given to testing new delivery systems, limited staff time, the full commitment of Columbia University personnel, and the lack of any existing mechanism for providing other non-AID personnel, these requests were not adequately dealt with and other requests have not been encouraged. It is very important to remember that community-based distribution systems are still not the most pervasive form of delivery system and, that for urban populations, may well not be the optimal delivery system. The Agency should have the capability to assist the field in improving whatever system exists. Moreover, even in countries with well-designed and implemented delivery systems, there may well be a need and desire to further improve the system through the analysis and modification of some aspect of the system. Here again, the Agency currently does not have that capability.

Although it is hard to predict what the demand for the services provided under the proposed contract will be in the absence of the services, it is believed that they will be in great demand. This contention is not only based on experiences in the field and discussion with Missions and host-country nationals, but also on the responses from an Airgram which was circulated to the Missions in 1977. This Airgram solicited Missions' opinions concerning the research needs in their respective countries. As Table 18 shows, the highest priority was given to research on the operational aspects of family planning programs. As with most Arigrams of this genre, there does not seem to have been any specific action taken as a result of the information gathered. The proposed project would enable the Agency to be more responsive in this area.

This project would be primarily concerned with providing assistance to the host-country governments. This would be done though technical assistance TDYs and, when appropriate, sub-grants with host country organizations. Indirectly, the project would have the potential to assist other DS/POP projects. For instance, it is likely that opportunities for contraceptive prevalence surveys (DS/POP/DEMO) will surface as a

result of work under this project. The numerous Contraceptive Retail Sales Programs (DS/POP/FPS) may wish to examine certain facets of their operations. The relative effectiveness of various communication (DS/POP/IEC) and training (DS/POP/TI) programs could be evaluated under this project. Lastly, the project would allow the Agency to increase the methodological sophistication of this area by soliciting studies on operations research. There is a wealth of information on family planning programs. However, these sutdies have almost always looked at contraceptive behavior only from the perspective of population and socio-economic specific variables, ignoring the program specific variables. While there have been some exceptions to this trend, the importance of these factors has not been fully appreciated until the influence of the World Fertility Survey (WFS) began to exert itself on the population professions. Under the WFS, a great deal of effort was required to get the acceptance of examining contraceptive behavior not only in terms of the societal context, but also in terms of the service infrastructure. While, in hindsight, this flaw seems almost simple-minded, it has only been in the last several years that leading population experts have focused on program specific variables. As a result, the state-of-the-art in operations research focusing on family planning is lagging behind other areas like fertility survey methodologies.

Under this project, top priority will be given to assisting the field. The Missions will be informed of the availability of the services under this project. After the demands of the field are assessed (both in terms of project staff and funds), the next level of activity would be determining what assistance other centrally-funded DSB projects might need. Then, after these have been determined, the project would issue a RFP for small grants in the field of Operations Research.

The organization that handled this project would have to have staff with a wide-range of skills. This requirement is illustrated by the following list of subjects that have, at one time or another, been suggested as problems to be addressed.

1. Renumeration of field workers
2. Charging for services
3. Training of paramedics
4. Testing different IEC interventions
5. Service/commodity mix
6. Cost accounting and analysis
7. Staffing patterns
8. Logistical networks
9. Referral systems (interface of clinic with community-based delivery system)
10. Service statistics system
11. Staffing pattern
12. Location of facilities
13. Price elasticity studies

14. Personnel-specific variables
15. Clinic operating procedures (hours, patient flow, staff utilization)
16. Evaluation systems

It will be difficult to find an organization that has all these skills in the area of family planning and, also has language capability in Spanish and French and staff who can travel for much of the year. The organization may be selected by competitive solicitation or a predominant capability cooperative grant agreement.

GHANA

Status: Several discussions and exchanges of letters have occurred with USAID/Accra concerning the establishment of an OR project in Ghana. However, there is no specific plan for a project at this time. There seems to be a high probability of initiating an OR project if Research staff can visit Ghana during the year.

NEPAL

Status: During this year, a number of draft protocols were developed for Nepal. While the reaction was favorable from both the Mission and HMG to a number of these protocols, there was no mechanism or organization to carry out the research. A staff member is visiting Nepal this January to explore, among other things, feasibility of OR projects in Nepal. Concerning funding requirements, it is not possible to state at this time if the OR activities would be under the bilateral program, or AID/W, or a combination of the two.

AFRICA

Status: In terms of staff time and intermediary efforts, Africa will have top priority. Until there are acutal site-visits, it is difficult to assess the potential for OR projects in Africa. During the past year, the staff have only visited one African country, Nigeria. It is not anticipated that efforts to initiate projects will begin to be reflected in actual projects until late in FY 1980.

Design: At this juncture, not much can be said about the designs of African OR projects. In all likelihood, these projects will have a greater emphasis on health and nutrition than family planning, at least in their initial phases. This contention in one reason why it is believed that the project obligations for Africa are not overly optimistic.

AFRICA WORKSHOP

A number of Africans and AID personnel have suggested that a small workshop for key Africans would prove valuable in developing leads for OR projects. This workshop would be organized by some African organization and would

be an African workshop. One of the lessons learned at the Tunis Conference is that the transferability of experiences outside of Africa to Africa has very limited potential. The purpose of this workshop, then, would be for African experts to generate their own interventions.

CENTRAL AMERICA

Status: There are not any specific protocols for Central America. However, we feel that the amount of funds budgeted for OR activities in Central America is, if anything, on the modest side. From the groundwork that has been done for the Latin American Conference, described above, there appears to be great potential for OR projects in Central America.

SOUTH AMERICA

Status: The same as indicated for Central America.

MIDDLE EAST

Status: The funds for this region may not be required. Three of the major countries in this region already have active OR projects—Morocco, Tunisia, and Egypt. Most of these activities are already under the bilateral programs and, by FY 1980, it is not anticipated that any central funds will be used in these countries, although there iwll still most likely be heavy technical assistance demands on staff time. While there has been some work on establishing OR projects in Jordan and Afghanistan, these efforts have not resulted in anything specific. During 1980, it is hoped that an on-site assessment of the countries in this region will be made. Based on this assessment, these funds will be reallocated.

MIDDLE EAST WORKSHOP

Status: No documentation has been prepared for this workshop. We feel that such a workshop would be very valuable by 1980. By that time, the programs in Morocco, Tunisia, and Egypt will have been in operation long enough to have clear indications of their success or failure. The workshop would serve as a forum for the discussion of what steps are necessary as a result of these experiences. In short, this workshop would be for the development of second or third generation community-based distribution programs.

WORLD CONFERENCE

Status: No documentation has been prepared for this project. However, such a conference would appear to the logical outgrowth of the Agency's efforts is this area. By 1981, there would have been 7 years of experience in the area of community-based distribution efforts. It seems appropriate that a global assessment of the aggregate experience.

BIBLIOGRAPHY

An important feature of any program dealing with an innovative approach is the dissemination of information. The OR effort in the Agency is still relatively new in terms of the invariable lag time experienced from project completion and the publication of results. Notwithstanding the newness of the OR program, there have been 106 publications, presentations, and papers directly resulting from the Agency's OR programs since 1973. Considering the fact that only a few of the individual OR projects have been completed, this is a respectable output. During the next two years, it is anticipated that there will be an extensive literature developed in population, family planning, and public health publications.

Investigators are encouraged to publish the results of their projects. This encouragement is done through a number of mechanisms. First, regional workshops have provided a catalyst and forum for the writing and presentation of results. Second, technical assistance is provided in the processing, analysis, and--in some cases--the writing of results. It should be remembered that a number of investigators have had little or no research experience and are primarily program administrators. Third, for unpublished papers, there is an attempt to get them as widely disseminated as possible.

The importance of establishing a literature in this area cannot be overestimated. The diffusion of an innovation is greatly, but not solely, dependent on the diffusion of information about the innovation. While it is impossible to determine the effectiveness of the efforts to increase the knowledge of OR projects and, in general, community based distribution projects, it has been the staff's experience that the host country nationals we dealt with during the last year are much more knowledgeable about the basic concepts in this area than was the case with comparable individuals several years ago. How much of this increase in knowledge and acceptability is due to the increase in information is not known. However, the flow of information concerning the OR program has other benefits.

Through the distribution and publication of the results of OR projects, the various efforts are subjected to criticism by the population/health field. Such criticism is helpful in reformulating existing and new projects. Such criticism involves a two-way flow of information. Here again, it is felt that such exchanges should be encouraged. Obviously, the activities covered under this project are not unique in this sense. All endeavors should be exposed to such scrutiny.

A word should be said about the items included in the bibliography. The following critieria were used to determine if a work should or should not be included:

1. All works resulting from activities discussed in the Project Paper are included, i.e., OR papers other than those falling under Project 0632 are included.

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2. Papers were included only if they related to OR-specific activities. For instance, under the Columbia University contract, the University staff produced over 850 papers. Only those relating to activities covered under this PP are included.

3. In order to be included, an item had to have fairly wide dissemination. Progress reports, trip reports memoranda, internal papers, etc., are not included.

4. In situations where a paper went through various versions, only the latest version is included unless the earlier versions were substantially different.

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TABLE 1
Obligations for OR Projects
From All Sources, FY 73-78
($000s)

	1973	1974	1975	1976	TQ	1977	1978	TOTAL
POPULATION/FAMILY RESEARCH IN THE MIDDLE EAST American University in Cairo Project 0109, nesa 547	270	60	200	13 (EL=$185)				543 (EL=$185)
FEASIBILITY AND EFFECTIVENESS OF CONTRACEPTIVE INNUNDATION APPROACH University Services Agreement (USA) Johns Hopkins University JHU 73-7, 76-3, 0916; csd-2956; pha-C-1159	150			75		70		295
MATLAB CONTRACEPTIVE DISTRIBUTION STUDY Cholera Research Laboratory, Dacca Project 0617, pha-C-1105			99	103		95		297
RESEARCH ON LOW-COST CONTRACEPTIVE DISTRIBUTION IN RURAL AREAS: 1. EUMYONG, 2. CHEJU-DO East-West Center Project 0628, pha-C-1094			81	122		140	100	443
VILLAGE AND HOUSEHOLD AVAILABILITY OF CONTRACEPTIVES, SOUTHEAST ASIA, 1976, University of Hawaii, Battelle csd-3310, sub-contract MC 0087				288				288
PARTERA EMPIRICA MCH PROJECT USAID/Managua, Ministry of Health, Project 524-0072				113		135	143	391
FAMILY PLANNING COOPERATIVES PROJECT Columbia University, APROFAM, and Federation of Regional Agricultural Cooperatives (FECOAR) Project 0855, pha-C-1107						50		50
FAMILY PLANNING COTTON GROWERS PROJECT Columbia University, APROFAM Project 0855, pha-C-1107						28		28

	1973	1974	1975	1976	TQ	1977	1978	TOTAL
PLANNING FAMILIAL A DOMICILE, (PFAD) USAID/Tunis, National Office of Family Planning and Population, (ONPFP), Project 644-0295				50		45	55	150
INTEGRATED DELIVERY SYSTEM USAID/Cairo, American University in Cairo (AUC) Governorate of Menoufia, Grants 263-78-G-028 and 029							1,073	1,073
SAN PABLO AUTOZAN Columbia University, Autonomous, University, and State of Mexico Project 0855, pha-G-1107				16		26		42
Sub-Total Non 0632	420	60	380	780		589	1,371	3,600 (EL=$185)
MENOUFIA 38 VILLAGE STUDY American University in Cairo Project 0632, pha-G-1139				25 (EL=$293)				25 (EL=$293)
FAMILY PLANNING/HYGIENE PROJECT Population Commission Project 0632, ProAg 76-18				200				200
TUNIS CONFERENCE Battelle Project 0632, pha-G-1155						186		186
COMMUNITY-BASED DISTRIBUTION Government of Thailand Project 0632, ProAg 493-0283-01						340	208	548
PLANNING FAMILIAL PAR LE COUPLE, (PFPC) Government of Tunisia Project 0632, ProAg 77-2						36	38	74
VISITES A DOMICILES SYSTEMATIQUE, (VDMS) Government of Morocco Project 0632, ProAg 608-77-4						147	310	457

	1973	1974	1975	1976	TQ	1977	1978	TOTAL
BASELINE SURVEY, FAMILY PLANNING/MCH PROJECT, NICARAGUA Centro de Investigaciones Sociales Nicaraguense Project 0632, Contract 524-77-088						10		10
FAMILY PLANNING/HEALTH PROJECT International Fertility Research Program (IFRP) Family Planning Association of Sri Lanka Project 0632, pha-C-1191						190	243	433
BOYACA FAMILY PLANNING PROJECT Population Council, Government of Colombia Project 0632, pha-C-1199						200		200
NEW STRATEGIES Columbia University, Government of Mexico Project 0632, pha-C-1200						530	693	1,223
OPERATIONS RESEARCH Government of Bangladesh Project 0632, ProAg 388-0001-2						150	-0-	150
NEO SAMPOONS ORTHO Project 0632, DPSE-C-0026							866	866
DISTRIBUTION A DOMICILE Government of Haiti Project 0855 for FY 77 Project 0632, ProAg 78-8						40	160	200
Sub-Total 0632 Subprojects				225 (EL=$293)		1,829	2,518	4,572 (EL=$293)
TOTAL	420	60	380	1,005	-0-	2,418	3,889	8,172

TABLE 2

Completed and Active OR Projects
By Funding Mechanism

	Number of Projects	Percent of Projects	Cumulative Percents
Funded by USAID	3	14.3	14.3
Funded by AID/W thru USAID	7	33.3	47.6
Funded by AID/W, no USAID in Country	6	28.6	76.2
Funded by AID/W	5	23.8	100.00
	21*	100.0	

*Excludes three projects which were non-country specific.

TABLE 3

OR Sub-Projects Under 0632
By Funding Mechanism

	Number of Projects	Percent of Projects	Cumulative Percents
Funded by AID/W thru USAID	7	63.6	63.6
Funded by AID/W, no USAID in country	2	18.2	81.8
Funded by AID/W	2	18.2	100.00
	11*	100.0	

*Excludes two sub-projects which were non-country specific.

TABLE 4

Active and Completed OR Projects
By Household or Village Based Distribution

Household

1. Population/Family Research in the Middle East, Egypt
2. Feasibility and Effectiveness of Contraceptive Innundation, Taiwan
3. Low-Cost Contraceptive Distribution, Euiryong, Korea
4. Low-Cost Contraceptive Distribution, Cheju-do, Korea
5. Planning Familial à Domicile, Tunisia
6. Menoufia 38 Village Study, Egypt
7. Family Planning/Health Project, Sri Lanka
8. Matlab Contraceptive Distribution, Bangladesh
9. Integrated Delivery System, Egypt
10. San Pablo Autopan, Mexico
11. Family Planning/Hygiene Project,* Philippines
12. Planning Familial Par Le Couple Tunisia
13. Visites à Domiciles Systematique Morocco
14. Boyaca Family Planning Project, Colombia
15. Distribution à Domicile, Haiti
16. New Strategies, Mexico

Village

1. Family Planning Cotton Growers Project, Guatemala
2. Partera Empirica MCH Project, Nicaragua
3. Family Planning Cooperatives Project, Guatemala
4. Community-Based Distribution, Thailand

* Designed for household distribution, but not implemented

TABLE 5

Planned Operations Research Projects
By Household or Village-Based Distribution

Household	Village
1. Family Health Project, Guatemala	1. Operational Research, Brazil
2. Primary MCH and Family Planning, Sudan	2. Community-Based Distribution, Nigeria
3. Family Planning and Child Nutrition Experiment, The Philippines	3. Community-Based Delivery of Family Planning and Health Services, Guatemala
	4. Community-Based Distribution, Paraguay
	5. MCH and Family Planning, Peru

TABLE 6

Active and Completed Operations Research Projects
With and Without Health Components

Fertility Control and Health Components

1. Matlab Contraceptive Distribution, Bangladesh
2. Partera Empirica MCH Project, Nicaragua
3. Family Planning Cooperatives Project, Guatemala
4. Integrated Delivery System, Egypt
5. San Pablo Autopan, Mexico
6. Family Planning/Hygiene Project* Philippines
7. Community-Based Distribution, Thailand
8. Planning Familial Par Le Couple, Tunisia
9. Visites a Domiciles Systematique** Morocco
10. Boyaca Family Planning Project, Colombia
11. Distribution a Domicile, Haiti
12. New Strategies, Mexico

*Designed to have health component but not implemented.

***Health services are part of non-project funded activities of fieldworkers.

Fertility Control Without Health Components

1. Population/Family Planning Research in the Middle East, Egypt
2. Feasibility and Effectiveness of Contraceptive Innundation, Taiwan
3. Low-Cost Contraceptive Distribution, Euiryong, Korea
4. Low-Cost Contraceptive Distribution, Cheju-do, Korea
5. Family Planning Cotton Growers Project, Guatemala
6. Planning Familial a Domicile, Tunisia
7. Menoufia 38 Village Study, Egypt
8. Family Planning/Health Project** Sri Lanka

**Designed as health project but unable to obtain helath commodities.

TABLE 7

Planned Operations Research Projects
With and Without Health Components

Fertility Control and Health Components	Fertility Control Without Health Component
1. Family Health Project, Guatemala	1. Operational Research, Brazil**
2. MCH and Family Planning, Peru	
3. Community Based Distribution, Nigeria	
4. Primary MCH and Family Planning, Sudan	
5. Family Planning and Child Nutrition Experiment, Philippines*	
6. Community Based Delivery of Family Planning and Health Services, Guatemala	
7. Community Based Distribution, Paraguay	

*Nutrition only.

**Has small parasite infestation component.

TABLE 8

CHANGES IN CONTRACEPTIVE PREVALENCE IN SELECTED OPERATION RESEARCH PROJECTS

Project Title	Country	Study Population Size	Before Intervention Prevalence	After Intervention Prevalence	Absolute Change (%)	Relative Change (%)	Before/After Time Period
Matlab	Bangladesh	125,000	1.1	15.0	14.9	1,263	1 year
		125,000 (control)	2.9	3.6	0.7	24	1 year
Modified Matlab	Bangladesh	160,000	13.0	36.0	13.0	100	13 months
Shanawan	Egypt	14,000	18.4	31.0	12.6	68.5	1 year
38-Village	Egypt	200,000	19.1	27.7	8.6	45.0	8 months
Fond Parisene	Haiti	32,000	4.5	18.8	14.3	317	8 months
Kuiryong	Korea	21,000	26.2	36.8	10.6	40.0	8 months
Cheju	Korea	400,000	20.7	34.6	13.9	67.1	2 years
		85,000 (control)	27.8	32.2	4.4	15.8	2 years
San Pablo Autopan	Mexico	8,000	6.6	34	27.4	415	21 months
MCH/ Family Planning	Nicaragua	720,000	4.4	8.3	3.9	88.6	1 year
Feasibility & Effectiveness	Taiwan	1,000,000	47	62.7	15.7	33.4	2 years
		500,000 (control)	47	66.2	19.2	40.8	2 years
PFAD	Tunisia	30,000	6.6	24.2	17.6	266	28 months
Jendouba	Tunisia	144,000	9	22	13	144	8 months

TABLE 9

METHOD SPECIFIC CONTRACEPTIVE PREVALENCE
BEFORE AND AFTER IMPROVED METHOD MIX: TUNISIA AND BANGLADESH

	Before Distribution	After Distribution Concentrating on OCs	After Improved Contraceptive Mix
		TUNISIA	
	4/76	6/77	8/78
OCs	1.0	4.8	4.2
IUDs	1.6	3.0	6.3
Sterilization	3.5	6.3	11.2
Other	0.4	0.6	0.3
Total	6.6	14.7	21.9
		BANGLADESH	
	10/75	5/77	12/78
OCs	0.7	8.7	6.3
IUDs	-0-	-0-	1.0
Sterilization	-0-	-0-	5.4
Neosampoons	-0-	-0-	1.2
Injectables	-0-	-0-	18.3
Condoms	0.1	2.4	3.2
Other	0.3	1.9	0.7
Total	1.1	13.0	36.3

TABLE 10

Male Versus Female Worker Productivity:
VDMS Project, Morocco

	Male Worker	Female Worker	Total
Total Number of Women Visited	11,823	16,725	28,548
Percent Accepting Pills at Initial Visit	59.4	58.0	58.6
Percent of Revisited Acceptors Who Continued to Use Pills	89.7	86.3	87.8

TABLE 11

Contraceptive Use by Type of Resupply System Among Married, Fecund Women 15-44 Years of Age Interviewed Before and 8 Months After the Household Distribution

Type of Resupply	Number of Women	Percent of Universe	USERS Before N (%)**	USERS Before (%)*	USERS After N (%)**	USERS After (%)*	Percent Change*** Absolute	Percent Change*** Relative
FREE								
With Clinic	7,431	(35.4)	1,442 (19.4)	(72.6)	2,103 (28.3)	(73.5)	(8.9)	(45.8)
Adjacent to Village with Clinic	2,567	(12.1)	500 (19.5)	(25.2)	687 (26.8)	(24.0)	(7.3)	(37.4)
Outlying from Village with Resupply Depot	636	(3.0)	43 (6.8)	(2.2)	70 (11.0)	(2.5)	(4.2)	(62.8)
TOTAL	10,634	(100.0)	1,985 (18.7)	(100.0)	2,860 (26.9)	(100.0)	(8.2)	(44.1)
CHARGE								
With Clinic	8,342	(39.7)	1,682 (20.2)	(83.2)	2,402 (28.8)	(81.4)	(8.6)	(42.9)
Adjacent to Village with Clinic	1,091	(5.2)	270 (24.7)	(13.4)	349 (32.0)	(11.8)	(7.3)	(29.3)
Outlying from Village with Resupply Depot	321	(4.4)	69 (7.5)	(3.4)	200 (21.7)	(6.8)	(14.2)	(189.9)
TOTAL	10,354	(100.0)	2,021 (19.5)	(100.0)	2,953 (28.5)	(100.0)	(9.0)	(46.1)

* Percent of all users ** Users as percent of all women in this resupply category
*** Change as percent of all women in resupply category

TABLE 12

Socio-Economic Variables as Predictors of Contraceptive Use Before and After Household Distribution 38-Village Study, Egypt

Variable	-Before- F	ETA	BETA	-After- F	ETA	BETA
Parity	112.5*	.39	.30	145.9*	.31	.24
Husband's Education	79.5*	.14	.14	119.6*	.11	.13
Child Survival**	19.9*	.31	.09	17.2*	.21	.06
Years Married	17.4*	.30	.10	43.1*	.26	.11
Wife's Employment ***	19.9*	.06	.06	12.4*	.04	.04
*P = < .0001				*P = < .0001		
R^2 = .187				R^2 = .126		
R = .433				R = .355		

**This ratio is the number of living children by the number of live births

***The categories are: Not working; Working, unsalaried; Working, salaried.

TABLE 13

Replication Status of Active or Completed OR Projects
Which Tested Delivery Systems

Replicated	Replication Intended	Replication Being Considered	No Replication	Not Applicable
1. Population/Family Research in the Middle East, Egypt	1. Boyaca Family Planning Project, Colombia	1. Community-Based Distribution, Thailand	1. Integrated Delivery System, Egypt	1. Patera Empirica MCH Project,* Nicaragua
2. Menoufia 38 Village Study, Egypt	2. Planning Familial Par Le Couple, Tunisia	2. Low-Cost Contraceptive Distribution, Cheju-do, Korea	2. Family Planning Cooperatives Project, Guatemala	2. Family Planning/Hygiene Project,** Philippines
3. Low-Cost Contraceptive Distribution, Eulryong, Korea	3. Visites a Domiciles Systematique, Morocco	3. Distribution a Domicile, Haiti	3. Family Planning/Health Project, Sri Lanka	
4. San Pablo Autopan, Mexico		4. Planning Familial a Domicile and Planning Familial Par Le Couple, Tunisia	4. New Strategies, Mexico	
5. Planning Familial a Domicile, Tunisia			5. Matlab Contraceptive Distribution, Bangladesh	
			6. Feasibility and Effectiveness of Contraceptive Innundation, Taiwan	

*Covers entire rural population, no replication required.
**Project terminated.

TABLE 14

Cost Per Acceptor For Selected Countries *

	Bangladesh		Costa Rica		Dominican Republic		El Salvador		Ghana		Hong Kong		India	
	U.S. $ per Acceptor	U.S. $ per Capita Funds	U.S. $ per Acceptor	U.S. $ per Capita Funds	U.S. $ per Acceptor	U.S. $ per Capita Funds	U.S. $ per Acceptor	U.S. $ per Capita Funds	U.S. $ per Acceptor	U.S. $ per Capita Funds	U.S. $ per Acceptor	U.S. $ per Capita Funds	U.S. $ per Acceptor	U.S. $ per Capita Funds
1972	26.31	.05	-	-	14.86	.06	23.85	.23	18.42	.07	15.01	.11	18.51	.20
1973	30.47	.08	-	-	9.79	.05	33.66	.28	28.48	.09	22.57	.17	18.31	.14
1974	49.92	.12	45.56	.60	25.98	.21	-	-	33.30	.12	25.58	.17	17.18	.13
1975	19.92	.16	54.67	.86	33.58	.40	38.54	.40	47.69	.16	27.81	.14	13.11	.14
1976	13.07	.18	-	-	35.96	.44	46.73	.60	61.00	.21	11.30	.14	13.08	.28

	Indonesia		Iran		Nepal		Philippines		Tanzania		Thailand		Tunisia	
	U.S. $ per Acceptor	U.S. $ per Capita Funds	U.S. $ per Acceptor	U.S. $ per Capita Funds	U.S. $ per Acceptor	U.S. $ per Capita Funds	U.S. $ Per Acceptor	U.S. $ per Capita Funds	U.S. $ per Acceptor	U.S. $ per Capita Funds	U.S. $ per Acceptor	U.S. $ per Capita Funds	U.S. $ per Acceptor	U.S. $ per Capita Funds
1972	9.78	.09	21.60	.35	10.43	.04	13.52	.22	-	-	8.99	.09	-	-
1973	11.02	.12	27.65	.41	8.40	.05	14.74	.27	-	-	9.82	.09	26.59	.21
1974	14.00	.17	41.22	.60	9.91	.08	22.61	.41	-	-	11.94	.12	45.36	.41
1975	14.66	.22	55.33	.85	13.75	.11	23.34	.42	11.39	.02	7.38	.09	46.66	.48
1976	9.49	.16	51.74	.88	-	-	39.28	.58	5.01	.03	-	-	35.21	.45

* Calculated from data in: D. Nortman and E. Hofstetter, Population and Family Planning Programs, A Population Council Fact Book, New York, NY, 1978.

TABLE 15

Two CRL Estimates of Cost (Service Intervention Only) Per Couple Years of Protection for Four Different Interventions with Contraceptive Prevalence Attained for Each Intervention: MATLAB

	Estimate I U.S.$	Estimate II U.S.$	Change in Prevalence
A. Household Distribution of Pills and Condoms	2.30	4.25	1 to 13
B. "A" with Addition of Depo-Provera	3.40	8.10	13 to 21
C. All Methods with Upgraded Field Staff	6.39	6.68	21 to 27
D. "C" with Addition of MCH Services	6.70	6.91	27 to 36

TABLE 16

Budget for OR Activities, FY 79-84
($000s)

I. ACTIVE PROJECTS AND SUBPROJECTS	1979	1980	1981	1982	1983	1984	Total
MATLAB CONTRACEPTIVE DISTRIBUTION STUDY Cholera Research Laboratory, Dacca Project 0617, pha-C-1105	100						100
RESEARCH ON LOW-COST CONTRACEPTIVE DISTRIBUTION IN RURAL AREAS East-West Center Project 0628, pha-C-1094	150						150
COMMUNITY-BASED DISTRIBUTION Government of Thailand Project 0632, ProAg 439-0283-01	211	186					397 397
PLANNING FAMILIAL PAR LE COUPLE (PFPC) Government of Tunisia Project 9632, ProAg 77-2	40						40
BOYACA FAMILY PLANNING PROJECT Population Council, Government of Columbia Project 0632, pha-C-1199	344	120					464
NEW STRATEGIES Columbia University, Government of Mexico Project 0632, pha-C-1200	667	75					742
OPERATIONS RESEARCH Government of Bangladesh Project 0632, ProAg 388-0001-2	150						150
OPERATIONS RESEARCH FOR FAMILY PLANNING PROGRAMS Columbia University Project 0855, pha-C-1107 (Functional Equivalent)	1,400	1,700	2,100	2,400	2,700	3,100	13,400

	1979	1980	1981	1982	1983	1984	Total
DISTRIBUTION A DOMICILE Government of Haiti Project 0632, ProAg 78-8	80	75					155
Sub-Total	3,142	2,156	2,100	2,400	2,700	3,100	15,598
II. PLANNED NEW SUBPROJECTS							
FAMILY HEALTH PROJECT, Guatemala PAHO/INCAP	797	797					1,594
OPERATIONAL RESEARCH BEMFAM, Brazil	250	250	150	450	475	475	2,050
MCH AND FAMILY PLANNING Government of Peru	502	250	200				952
COMMUNITY BASED DISTRIBUTION University of Ibadan, Nigeria	100	100	50	250	250	200	950
PRIMARY MCH AND FAMILY PLANNING Government of Sudan	130	150	150	300	350	350	1,430
FAMILY PLANNING AND CHILD NUTRITION EXPERIMENT Penn State, Cebu Institute of Medicine, Philippines	50	120	100				270
COMMUNITY BASED DELIVERY OF FAMILY PLANNING AND HEALTH SERVICES Government of Guatemala	269	50					319
LATIN AMERICA OR MEETING Government of Mexico	250						250
COMMUNITY BASED DISTRIBUTION Government of Paraguay	160	150	145	35			490
OPERATIONS RESEARCH IN FAMILY PLANNING Government of Mexico, Monterry Institute of Technology	150	100	25				275
Sub-Total of Planned New Projects *(Includes $300 from DS/HEA and $300 from DS/N)	2,658*	1,967*	820	1,035	1,075	1,025	8,580

III. POTENTIAL SUBPROJECTS	1979	1980	1981	1982	1983	1984	Total
EVALUATION OF COMMUNITY BASED INTERVENTIONS		300	500				800
OR COMPONENT RESEARCH, FAMILY PLANNING	225	350	800	1,000	1,200	1,400	4,975
GHANA	160	225	275	250			910
NEPAL		150	350	300			800
AFRICA		502	1,200	1,400	1,600	1,800	6,500
AFRICA WORKSHOP		200					200
CENTRAL AMERICA		250	350	400	450	450	1,900
SOUTH AMERICA		350	500	500	550	650	2,550
MIDDLE EAST		250	350	450	500	500	2,050
MIDDLE EAST WORKSHOP			350				350
WORLD CONFERENCE			600				600
Sub-Total of Potential Projects	385	2,577	5,275	4,300	4,300	4,800	21,637
TOTAL	6,185	6,700	8,195	7,735	8,075	8,925	45,815

TABLE 17
Person Days of Work for PHA/POP and Intermediaries for
Five Operations Research Projects as of May, 1977

1) Project 2) Time Period 3) Project Stage	- Person Days -					
	PHA/POP		Intermediaries		Total	
	TDY	In-House	TDY	In-House	TDY	In-House
1) Menoufia 38 Village Study, Egypt 2) 6/74 - 5/77 3) Expansion	26	65	-	-	26	65
1) Planning Familial a Domicile, Tunisia 2) 11/75 - 5/77 3) Expansion	35	20	20	65	55	85
1) Patera Empirica, Nicaragua 2) 1/76 - 5/77 3) Expansion	14	30	50	35	64	65
1) Community Based Distribution, Thailand 2) 6/76 - 5/77 3) Initial Fieldwork	10	16	-	-	10	16
1) VDMS, Morocco 2) 10/76 - 5/77 3) Initial Fieldwork	20	19	13	5	33	24
Total	105	150	83	105	188	255
Person Months	5.3	7.5	4.2	5.3	9.4	12.75

From: Gillespie to Ravenholt Memorandum
"Request for Additional Position"
May 19, 1977

TABLE 18

NUMBER OF COUNTRIES RESPONDING TO AIDTO CIRCULAR A-137, ACCORDING TO PRIORITY OF RESEARCH TOPIC

		Research Topics								
		Descriptive Demography		Population Policy and Social Research		Operational Aspects of Population/FP Programs		Improved Means of Fertility Control		Total
		Number	%*[1]	Number	%	Number	%	Number	%	N (%)
Urgent	N	5	(24)	5	(24)	9	(43)	3	(14)	(22)
	(%)** [1]	(23)		(23)		(41)		(14)		(100)
Important	N	7	(33)	9	(43)	10	(48)	12	(57)	38
	(%)	(18)		(24)		(26)		(32)		(100)
Desirable or Middle/Low Priority	N	7	(33)	6	(29)	2	(10)	4	(19)	19
	(%)	(37)		(32)		(11)		(21)		(100)
Of Slight Importance	N	2	(10)	1	(5)	0	(0)	2	(10)	5
	(%)	(40)		(20)		(0)		(40)		(100)
TOTAL		21	(100)	21	100	21	100	21	(100)	84 (100)

* Column totals.
** Row totals.

[1] Percentages may not add up to 100 due to rounding.

From: Gillespie to Ravenholt memorandum, "Request for Additional Positions," May 19, 1977, p. 17.

Figure I

AFTER L. CHEN
PRELIMINARY DATA
NOT FOR QUOTATION

NUMBER OF BIRTHS, MATLAB THANA "MODIFIED" CONTRACEPTIVE DISTRIBUTION AND CONTROL AREAS, BY MONTH, 1978

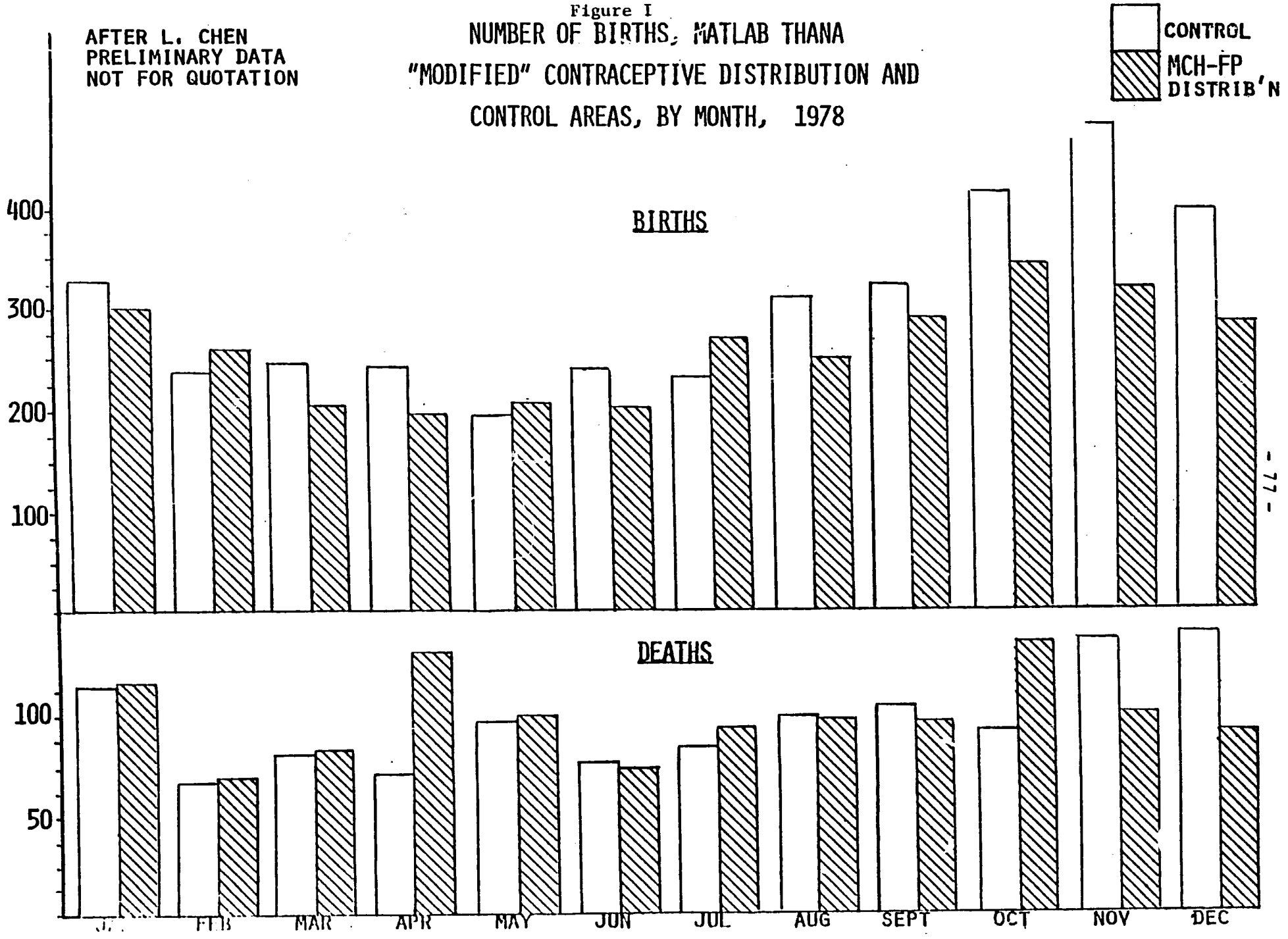
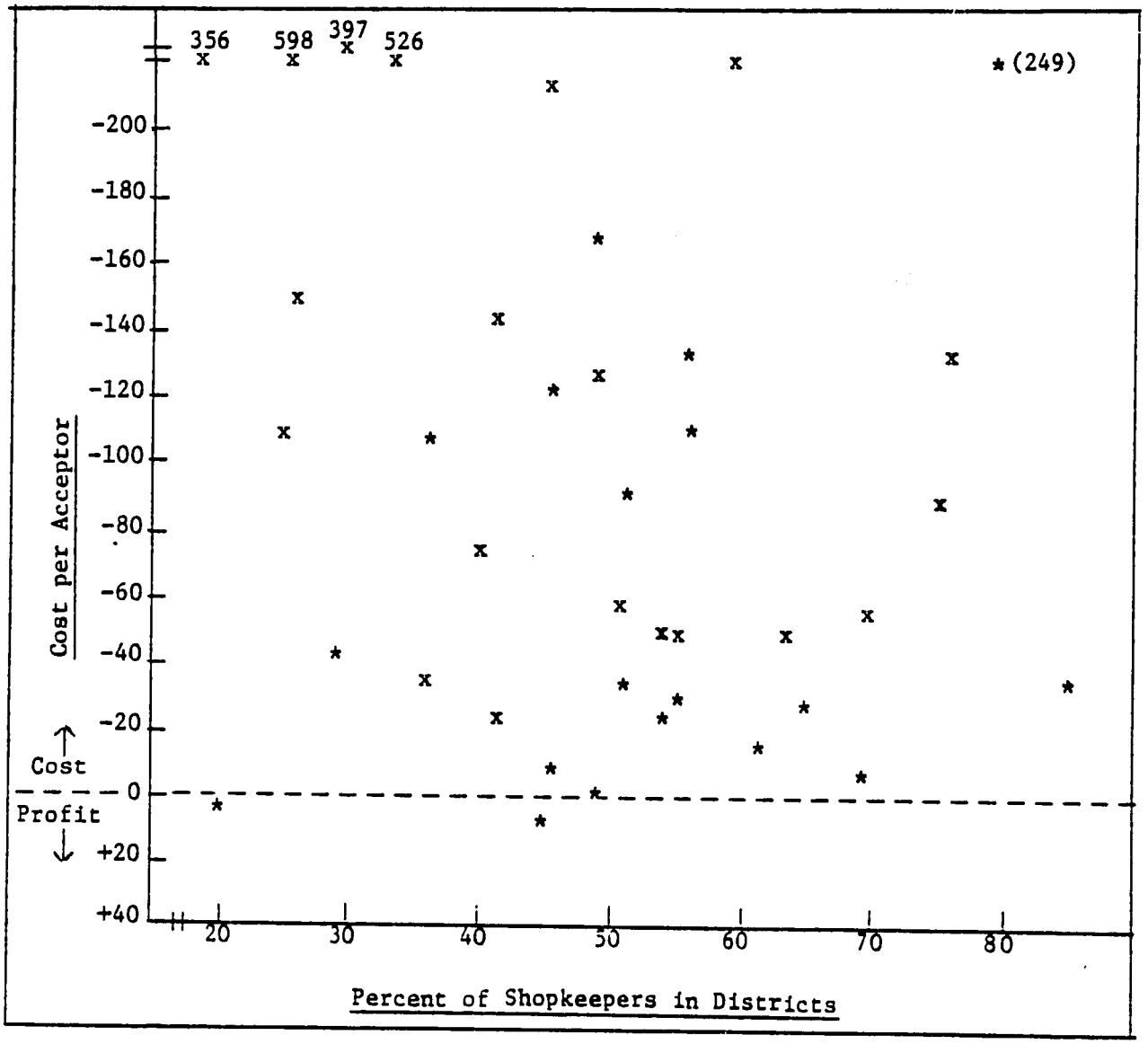


Figure II

Cost Per Acceptor by % of Shopkeepers;
40 Districts



* = Model A: Contraceptives only sold through retail outlets and rural agents.

x = Model C: Same as "A" but combined with retail sales of household drugs, referral for health services, and minimal health training of agents.

FIGURE IIIA

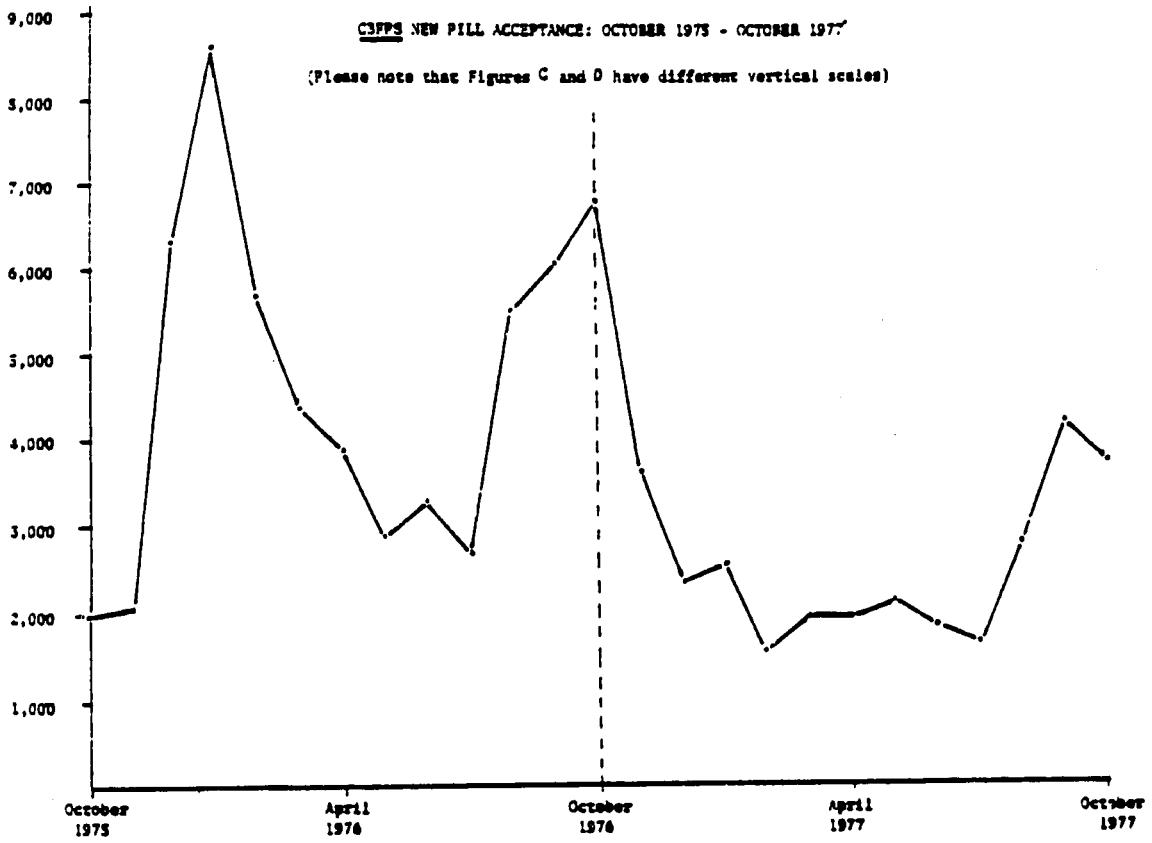


FIGURE IIIB

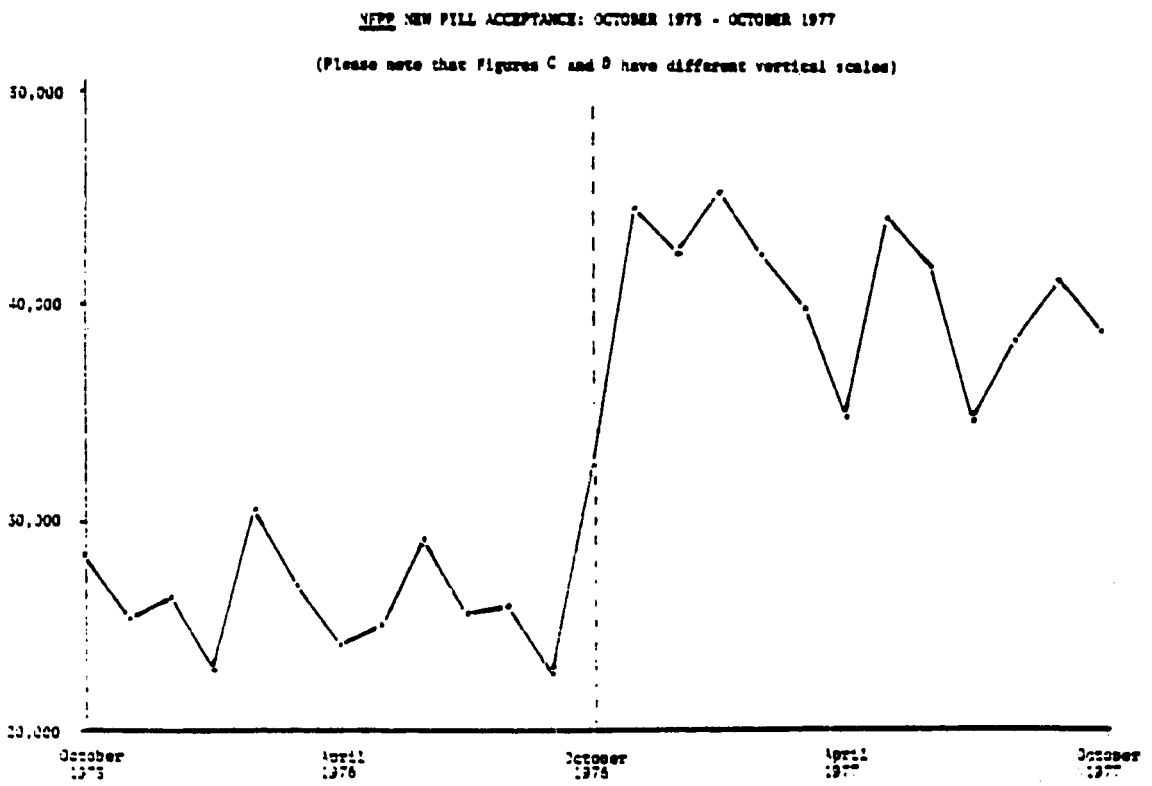
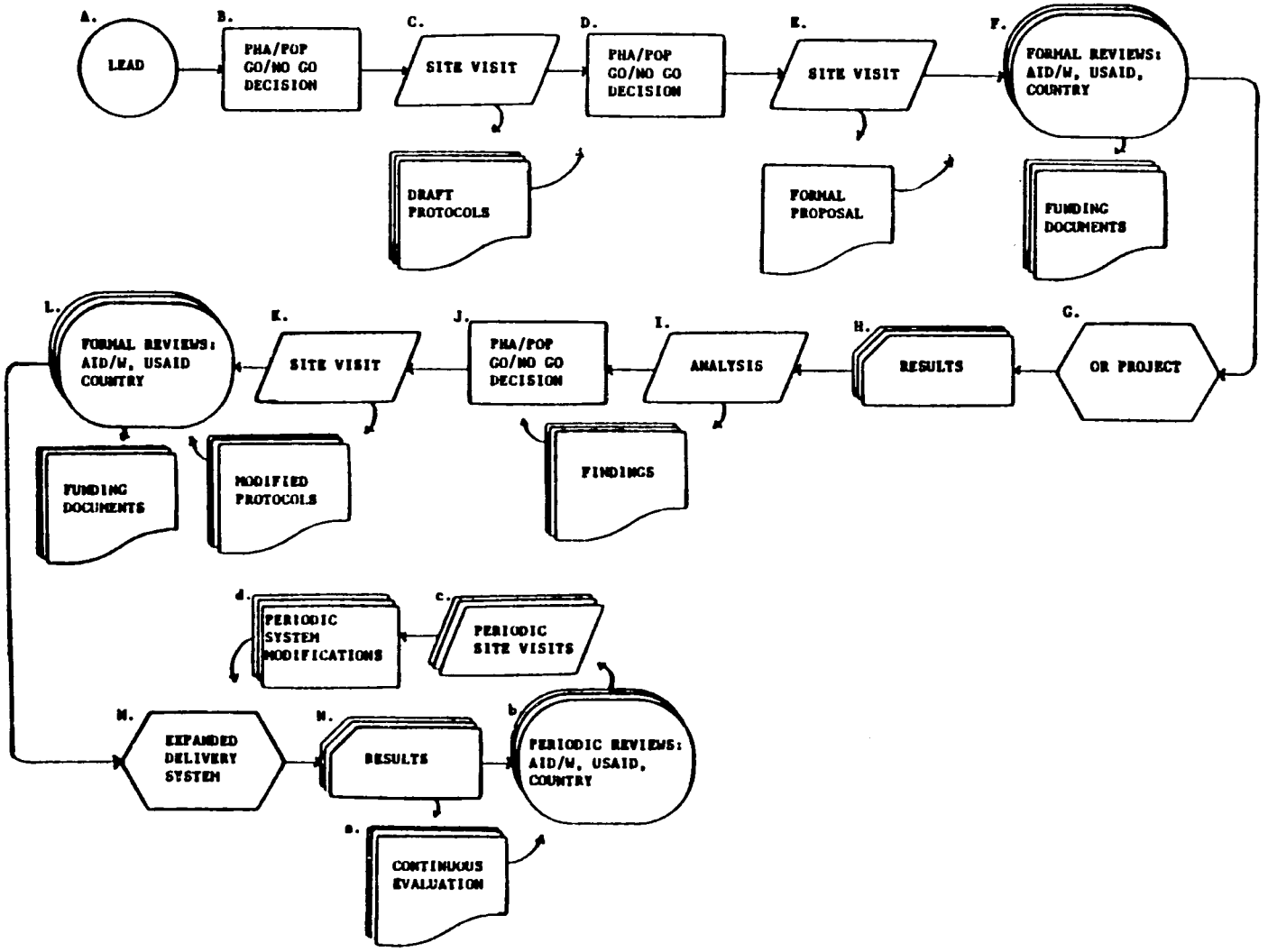


FIGURE IV

Diagram of a Successful
Operations Research Project



AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS PART I

1. TRANSACTION CODE: [A] (A = ADD, C = CHANGE, D = DELETE) — PAF

2. DOCUMENT CODE: 5

3. COUNTRY/ENTITY: Worldwide

4. DOCUMENT REVISION NUMBER: 1

5. PROJECT NUMBER (7 digits): 932-0632

6. BUREAU/OFFICE: A. SYMBOL: DSB; B. CODE: 36

7. PROJECT TITLE (Maximum 40 characters): Family Planning, Operations Research

8. PROJECT APPROVAL DECISION — ACTION TAKEN: 10 (A = APPROVED, D = DISAPPROVED, DE = DEAUTHORIZED)

9. EST. PERIOD OF IMPLEMENTATION: YRS. 79; QTRS

10. APPROVED BUDGET AID APPROPRIATED FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE C. GRANT	PRIMARY TECH. CODE D. LOAN	E. 1ST FY 79 F. GRANT	E. 1ST FY 79 G. LOAN	H. 2ND FY 80 I. GRANT	H. 2ND FY 80 J. LOAN	K. 3RD FY 81 L. GRANT	K. 3RD FY 81 M. LOAN
(1) PN	J430	J440		5585		6100		7595	
(2) PN(HEA)	J530	J520		300		300		300	
(3) FN	J320	J380		300		300		300	
(4)									
TOTALS				6185		6700		8195	

A. APPROPRIATION	N. 4TH FY 82 O. GRANT	N. 4TH FY 82 P. LOAN	Q. 5TH FY 83 R. GRANT	Q. 5TH FY 83 S. LOAN	LIFE OF PROJECT T. GRANT	LIFE OF PROJECT U. LOAN
(1) PN	7735		8075		48,587	
(2) PN(HEA)					900	
(3) FN					900	
(4)						
TOTALS	7735		8075		50,387	

11. PROJECT FUNDING AUTHORIZED (ENTER APPROPRIATE CODE(S)) 1 - LIFE OF PROJECT 2 - INCREMENTAL, LIFE OF PROJECT: A. GRANT = 2; B. LOAN =

C. PROJECT FUNDING AUTHORIZED THRU: FY 84

12. INITIAL PROJECT FUNDING ALLOTMENT REQUESTED ($000) — B. ALLOTMENT REQUEST NO. ____

A. APPROPRIATION	C. GRANT	D. LOAN
(1) PN	5585	
(2) PN(HEA)	300	
(3) FN	300	
(4)		
TOTALS	6185	

13. FUNDS RESERVED FOR ALLOTMENT

TYPED NAME (Chief, SER/FM/FSD)

SIGNATURE

DATE

14. SOURCE/ORIGIN OF GOODS AND SERVICES: [X] 000 [X] 941 [ ] LOCAL [ ] OTHER ____

15. FOR AMENDMENTS, NATURE OF CHANGE PROPOSED

FOR PPC/PIAS USE ONLY	16. AUTHORIZING OFFICE SYMBOL	17. ACTION DATE (MM DD YY)	18. ACTION REFERENCE (Optional)	ACTION REFERENCE DATE (MM DD YY)

AID 1330-6 (7-78)

OPERATIONS RESEARCH PROJECTS

April 1979

Prepared by:
Research Division
Office of Population
Bureau for Development Support
Agency for International
Development

April, 1979

a) Country, b) Organization/s c) Site, d) Monitoring Unit	Project Description	Project Status	Results
1. a) BANGLADESH b) Cholera Research Laboratory (CRL) "Original" Study Design c) Matlab thana d) AID/W	Population: 250,000 One-half of the population in control; other half household distribution area. Lay, local women distributed free 6 cycles OCs or 72 condoms in distribution area. Resupply thru village depots. Periodic prevalance surveys conducted in both areas. A special study conducted in distribution area during household distribution was complemented with Depo-Provera distributed by specially trained male workers.	7/75 - 10/77 Project modified (See "Modified" study design below)	One year after initial distribution, the contraceptive use increased among MWRA* in control area from 2.9% to 3.6%, an increase of 24.1%. In the distribution area, contraceptive use increased from 1.1% to 15.0%, an increase of 1.263%. In the Depo-Provera study, contraceptive prevalence then increased from 14% to 20% in three months. Preliminary data on demographic impact shows 11-17% reduction in fertility rate.
2. a) BANGLADESH b) Cholera Research Laboratory (CRL) "Modified" Study Design c) Matlab thana d) AID/W	Population: 160,000 (80,000 each from original service and control areas) rebifurcated to modified service and control areas. Following changes in service were made: 1) Wider variety of contraceptive services offered including injectables, sterilization, IUDs and foaming tablets. 2) Higher level, better trained field workers added. 3) Other MCH services are gradually being added.	10/77 - 9/78 under direct DS/POP/R funding. Continuing under UNFPA and AID "core" funding with some DS/POP support for data analysis.	One year after introduction of modified service, contraceptive prevalence increased from about 13% to 36%, of which one-half has use of injectables. Fertility appears to have been reduced by at least 30%.
3. a) BANGLADESH b) Ministry of Health and Population, Labor and Social Welfare (MOH) c) Various sites d) USAID/Dacca and AID/W	Population: Multi-study populations. This is a small grants project which will sponsor a number of subprojects in operations research. The research will focus on ways to make family planning programs more cost-effective through action and evaluation research. Subprojects will be with private and government organizations.	10/77 - 6/79 10 research projects underway. Examples are: comparison of family planning service programs with and without village "Depot" holders, comparison of different acceptor follow-up schedules, a follow-up study of tubectomy recipients, and a comparison of government worker job description and job performance	No results to date.

Unless noted otherwise, MWRA refers to all married women 15-45 years of age.

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4. a) COLOMBIA b) Population Council and Ministry of Health c) Santander Sectional d) AID/W	Population: 300,000 Two types of service delivery are being tested, both utilize household distribution: (a) Paramedics who have received 4 months training are distributing free 3 cycles of OCs or 36 condoms, and give nutritional and sanitation information. (b) Paramedics receiving 4 months of training will distribute free 3 cycles of OCs or 36 condoms, nutritional and sanitation information, treatment for intestinal parasites, and iron/calcium/vitamins for lactating women. Both systems resupply through village depots and have revisits.	10/77-9/81 Fieldworkers have been selected, trained and deployed. The results of the baseline census should be available by the fall, 1979. Services are being delivered. The two delivery systems are being tested in population of 50,000 each. Based on these experiences, the services will be expanded to an additional 200,000 persons in 1980.	Project experienced delays in implementation. Quantitative results anticipated in early 1980. Yet, MOH has announced that the medical norms, training curriculum, and early project experience will be utilized in expansion of household distribution throughout entire rural MOH program.
5. a) EGYPT b) American University in Cairo c) Shannawan, Menoufia d) AID/W	Population: 14,000 Free household distribution of OCs by local lay women. Village resupply of free OCs.	10/74-12/76 Household distribution has been completed and village resupply functioning. Project is completed, but is still being monitored through service statistics.	One year after the initial distribution, contraceptive prevalence amont MWRA in study area before and one year after distribution increased from 18.4% to 31%, a 68% increase. Service statistics suggest that prevalence was 35% in January, 1979.
6. a) EGYPT b) American University in Cairo c) Part of Menoufia Governorate d) AID/W	Population: 200,000 Four systems are being tested: (a) Free household distribution of OCs, free resupply at clinic. (b) Free household distribution of OCs, free resupply at village. (c) Free household distribution of OCs, resupply sold at clinic. (d) Free household distribution of OCs, resupply sold at village depot. Distribution and village resupply agents are local women.	7/76-12/77 Household distribution completed in 1/77. In response to community needs, "social welfare" component tested in Shanawan village (see 5 above). A contraceptive prevalence survey was completed in 11/77.	Before household distribution, 19.1% MWRA were contracepting. Eight months after distribution, contraceptive prevalence was 27.7%, a relative increase of 45%. All 4 delivery systems performed comparably. In Shanawan, variety of nutritional, health and educational activities established. Physical structures for these built through self-help projects.

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7. a) EGYPT b) American University in Cairo (AUC); Ministry of Health; Ministry of Social Welfare c) Menoufia Governorate d) USAID/Cairo and AID/W	Population: 1.4 million. Specially trained canvassers distribute OCs, vaginal foaming tablets, and Oralyte to all households. Referral for clinical methods are made and, for pregnant women, tetanus toxoid series. Major community development component through county and village councils.	6/78-6/81 Baseline fertility/health survey completed. Pretest for Oralyte completed. Governorate personnel have been trained in family planning, health, and community development. Services now being delivered to one-third of Menoufia population. Variety of community development projects operational	No quantitative results to date, but administrative feasibility of comprehensive intervention has been documented.
8. a) GUATEMALA b) Columbia University, Guatemalan Association for Family Welfare (APROFAM) and Federation of Regional Agricultural Cooperatives (FECOAR) c) Six Departments d) AID/W	Population: [illegible] 100 Campesino union members will distribute oral contraceptives and condoms at a low fixed price under supervision of 10 MCH promotorns. Simple medicaments are included in the system. Surveys will be used to evaluate the project.	9/77 - 6/79 96 distributors are in place. A post survey is scheduled for April, 1979. Program is more successful in ladino area than in Indian or mixed areas. Anthropological assessment of program among Indian population of Quiche has led to modifications--recruitment of husband and wife teams to act as distributors.	As of October, 1978, there were 1,662 active users of whom 821 were taking oral contraceptives.
9. a) HAITI b) Columbia University and Ministry of Health c) Fond Parisene, St. Marc, and Leogane d) AID/W	Population: 32,000 Delivery systems are being tested in three areas. In each, distributors are traditional health practitioners who visit households offering free 3 cycles of OCs or 30 condoms, and referral for male and female sterilization. Initial resupply is through revisit and later through village retail outlets. Delivery systems are: a) contraceptives distributed in an area already served by national program; b) contraceptives distributed in area not served by national program; c) contraceptives plus treatment for intestinal parasites, infant diarrhea, maternal and child nutrition in area not served by national program.	10/77 - 1/80 Service delivery is underway in two of three study areas. Service delivery in third area to begin late 1979.	In area (a), baseline prevalence was 4.5%. Four months after household distribution, prevalence among MWRA was 18%. Eight months after distribution, prevalence was still 18.8%.

a) Country, b) Organization/s c) Site, d) Monitoring Unit	Project Description	Project Status	Results
10. a) KOREA b) East-West Center, Hawaii; and Korean Institute for Family Planning (KIFP) c) Eutryong Gun d) AID/W	Population: 21,000 Three types of household distribution were tested. All entailed free distribution of three cycles of OCs or 30 condoms. Referral coupons were issued for free IUDs and female sterilization. Resupply was through village depots. Three types are: (a) Salaried Canvassers visited every household. (b) Local contracepting women recruited to distribute contraceptives on a voluntary basis. (c) Group meetings were held during which contraceptives distributed.	10/74 - 12/77 This study designed to test feasibility of household distribution. Service statistics continue to be monitored.	Four months after initial canvass, contraceptive prevalence among MWRA 15-49 years of age increased from 26.2% to 36.8%, an increase of 40.5%. Little difference found between three delivery systems in terms of contraceptive use, but "a" was easiest to implement.
11. a) KOREA b) East-West Center, Hawaii; and Korean Institute for Family Planning (KIFP) c) Cheju Island d) AID/W	Population: 400,000. Control: 85,000. Lay women distribute free 3 cycles OCs or 30 condoms. Referral coupons issued for free IUDs and sterilization. Resupply at three village depots. Two special studies being conducted: (a) In area of 20,000, distributors sell OCs for $.30 per cycle and condoms for $.07 for 10; (b) In area of 72,000, distributors are paid half regular salary and an additional amount per acceptor recruited ($.20 per acceptor above 30% eligible women).	10/76 - 6/81 After two years of service delivery, 39% of eligible women in sample survey reported that they had not been contacted by a canvasser. Canvassing will continue until close to 100% of eligible couples are contacted. Service delivery will terminate in January 1980. An endline survey to assess impact on fertility rates will be carried out in October, 1980. Fee-for-service distribution found to be too complex to administer and was dropped.	Use of the most effective methods of family planning (sterilization, IUD, oral contraceptive, condom) among married women 15-49 has increased from 17.8% to 29.2% in the treatment area in 2 year period. Use of these methods has remained unchanged in control area at 25% Use of all methods of family planning increased from 20.7% to 34.6% in treatment area and increased from 27.8% to 32.2% in the control area.

a) Country, b) Organization/s c) Site, d) Monitoring Unit	Project Description	Project Status	Results
12.a) MEXICO b) Columbia University Autonomous University and State of Mexico c) San Pablo Autopan d) AID/W	Population: 8,000 MOH paramedics and traditional health practitioners visit each household, offering free 3 cycles of OCs, a dozen condoms, and Depo-Provera, with referral for IUDs. Following health services also offered: for intestinal parasites, diarrhea, external lesions. Resupply through village depots.	3/76 - 7/77 Final evaluation completed.	Contraceptive prevalence among MWRA 15-49 years of age increased over a 21-month period from 6.6% to 34%, an increase of 415%.
13.a) MEXICO b) Columbia University c) Four States and Federal District d) AID/W	Population: 1,000,000 860 MOH paramedics and traditional health practioners will test different strategies of service delivery in remote rural areas of 4 states and in 4 urban slums. These include: (a) Comparisons of agents with varying salaries providing free supplies with commissioned agents vending the supplies (several different models of compensation will be tested). (b) Comparisons of delivery systems with and without basic medicaments. (c) Comparisons of different kinds of community agents. (d) Comparison of different ratios of community agents to-population. The delivery systems all include oral contraceptives and condoms, and referral to clinics for Depo-Provera, IUD and sterilization services.	10/77 - 11/81 Project builds on experience of San Pablo Autopan study. Sites have been identified and personnel selected and trained. Delivery of services has begun in some areas and early census results are being analyzed.	No quanitative results to date.

a) Country, b) Organization/s c) Site, d) Monitoring Unit	Project Description	Project Status	Results
14. a) MOROCCO b) Ministry of Public Health, IFRP c) Marrakesh d) USAID/Rabat and AID/W	Population: 1,200,000 MOPH fieldworkers will visit households offering free 4-6 cycles of OCs or condoms based on medical history. Initial resupply through second household visit with subsequent resupply through village depots. Referral for female sterilization and IUDs. Distributors will continue health activities of malaria control, TB treatment and health census.	7/77 - 12/80 Initial household distribution has been completed for Marrakesh City and half of city has had initial resupply visit. Initial distribution for semi-rural and rural area started 1/79.	Project is first MOPH initiated system allowing household distribution of contraceptives. Based on acceptance of project, MOPH now allows OCs to be distributed at all dispensaries, increasing the number of prescribing outlets from 230 to 1,130.
15. a) NICARAGUA b) Ministry of Health c) Country wide (rural areas) d) USAID/Managua and AID/W	Population: 720,000 Indigenous midwives receive 5-days training in the use of a basic health kit comprised of OCs, condoms, oral rehydration salts, antiparasitic tablets, prenatal vitamins with iron and folate, aspirin, simple obstetrical equipment and a canvas bag. The initial kit is free. Midwives sell medicaments in their communities at a subsidized price and retain a commission. They obtain resupply at a local MOH clinic.	11/76 - Indefinite The single training/supervision team has trained approximately 750 midwives, approximately 2/3 of whom are considered active in the program. A baseline contraceptive prevalence survey was carried out in July-August, 1977, in one rural district. In August, 1978, a mass media campaign to promote the use of midwife services was begun in the same region. Planned improvements in midwife selection and supervision have been impeded by current political unrest, and a follow-up evaluation survey has been postponed.	Contraceptive sales to midwives indicate an increase in the prevalence of OC use from 4.4% of ever-married women 15-49 years of age to at least 6.6% after the first full semester of service delivery, and a further increase to 8.3% after one year, a relative increase of 89% over baseline. Largely as a result of the current political situation, the project has not reached the original project objective to train 1,800 midwives.
16. a) PHILIPPINES b) Commission on Population (POPCOM) c) Undetermined d) USAID/Manila and AID/W	Population: 500,000 One-half of the population will be used as control. Delivery system consists of household distribution during which free 3 cycles of OCs and 12 colored condoms will be offered.	12/76 - 12/79 Pilot tests were conducted to determine what materials, in addition to contraceptives, might be effectively distributed.	One pilot test of distribution materials found that 90% of 865 households offered free condoms and OCs accepted them. Of the 883 households offered free condoms, OCs, and bars of soap, only one household refused the items. However, no usage data was collected and system was not expanded due to joint POPCOM, USAID, and AID/W decision to terminate the project because of the evolution of the national outreach program.

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17. a) SRI LANKA b) International Fertility Research Program (IFRP) and Family Planning Association of Sri Lanka c) Various sites d) AID/W	Population: 120,000 Nurse auxiliaries and lay personnel distribute free 3 cycles of OCs; 30 condoms; and make immediate referral for male and female sterilization, Depo-Provera, and IUDs. Resupply first by home revisits and later through village depots. Study compares cost-effectiveness and impact of vitamin and OCs versus OCs alone. There are two rural segments of over 10,000 households each (one in Singhala and one in Tamil ethnic areas) and one urban segment to the research.	10/77 - 4/81 Distribution is underway in one rural area (Singhala) and in the urban segment Baseline prevalence surveys are completed and analysis performed for the Singhala area. The rate of enrollment has been increased by delegation of prescription to the lay personnel with nurse auxiliaries now providing only supervision and backup visits.	First area baseline survey of fertility and contraceptive prevalence shows average of 1.8 live births per couple; prevalence of 19% use of modern methods. Service records and impact assessment for first rural segment to be available in early 1980.
18. a) TAIWAN b) Johns Hopkins University National Health Administration, and Joint Commission on Rural Reconstruction c) Countrywide d) AID/W	Population: 1.5 million Two household distribution systems were tested: (a) All women having a birth in last year were visited at home and offered free 6 cycles of OCs and 6 dozen condoms; (b) All households visited and MWPA 15-49 years of age offered free 6 OCs and dozen condoms. In both systems, regular family planning workers did distribution. Women asking for IUDs or sterilization were given coupon. Each system served population of one-half million. A control population of one-half million with regular program was evaluated.	1/74 - 6/78 Contraceptive distribution complete with follow-up visits in selected townships also completed. End-line survey completed. Data analysis focusing on socio-economic differentials of fertility and contraceptive use.	Both treatment and control areas show high levels of contraceptive use (70% of non-pregnant women) after four years of service delivery. Baseline prevalence among MWRA 15-49 years of age was 47% in both treatment and control areas, now 62.7 for the treatment and 66.2 for the control. Condom and pill use is greater in the study area than in the control area; IUD use is much greater in the control area. Proportionately more of the couples in the control area are sterilized.

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19. a) THAILAND b) Ministry of Public Health c) Countrywide d) USAID/Bangkok and AID/W	Population: 6.5 million Four delivery systems being tested: (a) Selling of OCs ($.25 per cycle) and condoms ($.45 per dozen) by lay male and female village agents. (b) Same as "a" but initial household distribution of free 2 cycles of OCs or dozen condoms. (c) Same as "a" but agents also sell variety of household drugs. (d) Same as "b" but agents also sell household drugs. In all systems, referrals made for IUDs and female sterilization.	3/77 - 3/81 Baseline survey in N.E. districts and delivery systems implemented in 80 rural districts with a total of 5,000 village distributors. A minimum of 8 months service records in all districts. Team evaluation and report completed 2/79 on first stage. Design modifications now under negotiation for final two years of operations research.	Project has already attained overall 80% (65,100) of projected acceptors and is on schedule. Only model (a) is approaching self-sufficiency. Results indicate that the inclusion of household drugs does not improve level of contraceptive use nor cost-effectiveness. Financial self-sufficiency for field operations not likely before 1982. This program now utilized by about 4% of the MWRA and constitutes about 20% of all oral contraceptive users in the 80 districts.
20. a) TUNISIA b) National Office of Family Planning and Population (ONPFP) c) Bir Ali, Sfax Governorate d) USAID/Tunis and AID/W	Population: 40,000 Household distribution of free OCs (6 cycles) and free resupply of OCs (6-9) through household distribution by local lay women. Referrals and transportation arranged for IUD insertions and female sterilizations. Ultimate resupply through clinics, mobile teams and nurse-hygienists. Demonstration project designed to test feasibility of delivery system in rural Tunisia.	1/76 - 3/79 Between 4/76-8/78, a household canvass and total of two to four follow-up visits were conducted in 9 sectors of Bir Ali delegation (pop. 30,000) as well as an initial visit and one revisit in two sectors of Regueb delegation (pop. 10,000). A final survey was completed in Bir Ali delegation (3/79) and permanent resupply system established. Survey results are being processed with a final report expected 6/79.	One year after initial distribution, contraceptive prevalence among MWRA more than tripled, from 6.6% to 20%. Last revisit data (2/78-8/78) show increase in, contraceptive use rates, over 28-month period, of 1% to 4.2% (OCs); 1/6% to 6.3% (IUDs); 3.5% to 11.8% (sterilization) and 0.4% to 0.3% (other methods). Contraceptive prevalence at final survey (9/78) is estimated at 24.2%, according to preliminary results.
21. a) TUNISIA b) National Office of Family Planning and Population (ONPFP) c) 3 delegations, Jendouba Governorate d) USAID/Tunis and AID/W	Population: 144,000 Household distribution by local lay women of free OCs (6 cycles), condoms, foam and jellies with referrals for IUDs and female sterilizations. Initial free resupply of OCs and other contraceptives given during second household visit. Various permanent resupply systems will be tested with emphasis on free distribution by nurse-hygienists and social workers. Study will compare cost-effectiveness and impact of family planning only delivery system (2 delegations) with integrated FP/basic MCH care delivery system (1 delegation).	5/77 - 5/80 Project builds on experience of Sfax feasibility study. Household distribution started 7/77. Entire project area has been canvassed. In the 1st delegation (Fernana), all eligible women have been revisited and a contraceptive prevalence survey conducted. Resupply systems are functioning in two delegations. An integrated FP/MCH delivery system is being implemented in the 3rd delegation. Final contraceptive prevalence survey scheduled for Fall 1979.	In the 1st delegation, 6 months after initial household visit, contraceptive prevalence among MWRA increased from an estimated 9% to 22%, an increase of 144%.