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Family Planning Digest

A Publication of the National Center for Family Planning Services, Health Services and Mental Health Administration, U.S. Department of Health, Education, and Welfare.

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DHEW Five-Year Plan

Serve 6.6 Million, Spur Research for New Contraceptives by 1975

DHEW Secretary Elliott L. Richardson presented to Congress last October 12 one of the most detailed plans for delivery of health services ever to be developed by any U.S. government agency. "A Five-Year Plan for Population Research and Family Planning Services," mandated by the Family Planning and Population Research Act of 1970 (P.L. 91–572), sets major service and research goals to be achieved by 1975 through leadership of the federal government in partnership with the private sector, at a total estimated cost of $542–634 million. The goals include:

• 6.6 million low-income women should be provided with subsidized family planning services by 1975, at an estimated cost in that year of $360–395 million.

Plan projects bringing medically supervised family planning services to 6.6 million women in 1975.

• A range of fertility control methods for men and women which are safe, effective, inexpensive and reversible should be developed, and existing methods improved so that they will be more acceptable and reliable. Social research should facilitate an understanding of the determinants of fertility behavior and of the consequences of population trends. By 1975, the estimated annual cost of such research would be $150–220 million.

• A manpower pool of some 90,000 family planning workers, exclusive of physicians, should be developed and trained by 1975. Some 6,500 of them would be full-time workers, the rest part-time. (In addition, between 6,000 and 8,000 physicians will be needed to work about 36,000 hours a week in family planning.) The estimated annual training cost by 1975 would be $9–10 million.

• Information and education programs and materials should be prepared and distributed which will communicate directly to persons concerned with how family planning can improve the quality of their individual and family lives, and will help build community support and acceptance of family planning. Materials on the causes and consequences of U.S. population growth also are to be developed and distributed. It is estimated that total annual expenditures by 1975 should be $5–7 million.

• Operational research, planning and evaluation should be further developed to strengthen program design, improve methods of service delivery and refine methods of measurement. In connection with the latter objective, an improved National Reporting System for Family Planning Services is being developed, to be used by all federally supported family planning programs as well as by other agencies wishing to participate. (An estimated 3,000–5,000 clinics will be participating in the system by 1975.) The annual cost by 1975 is estimated at $18–22 million.

The primary objective of the federally supported program detailed in the plan is "to enable Americans freely to determine the number and spacing of their children" by providing them with the "medical, so-

cial and educational services necessary to avoid unwanted pregnancy." The plan notes that "although most citizens of this nation practice family planning, the effectiveness of the methods employed and access to contraceptive services show wide variation." It is to provide "equal access" for all those in need that the five-year plan for services was developed.

Universe of Need

"While the goal of the program is to assist in providing services to all who need and want them," the plan states, "priority has been assigned to the provision of services to those who cannot afford private medical care." This plan has defined this group as including all those whose incomes are at or below 150 percent of the federal poverty level (as defined by DHEW's Social Security Administration). The plan states that the income level that may define a "need" for subsidized family planning should go beyond the official poverty level because to wait until family size increases to the point where the family is "classified as poor or near-poor before subsidized family planning care is provided would defeat the program's secondary objective of helping individuals and families to avoid the dependency which may be caused by the birth of an unsought child." The total number of women "in need," using this yardstick, comes to 6.6 million by 1975, excluding those not exposed to pregnancy, those who are already pregnant or seeking a desired pregnancy and those who are unable to conceive. At the present time, it is estimated, no more than 2.9 million low-income patients are receiving family planning assistance from all sources (including private physicians). The plan projects that, by FY 1975, the capacity to provide family planning services would expand to include at least 3.7 million additional individuals.

The plan points out that a disproportionate share of family planning programs currently is concentrated in large metropolitan areas, so that a particular effort will be needed to increase the caseload in nonmetropolitan counties. Thus, nearly a four-fold increase in patients is projected for nonmetropolitan areas (from 0.8 to 3.0 million) and a threefold increase for small metropolitan areas (from almost 0.2 to more than 0.5 million); medium-sized metropolitan areas would have to more than double the number of patients they serve (from more than 0.6 to 1.3 million), and large metropolitan areas would need to increase their service levels by about 40 percent (from 1.3 to 1.8 million patients).

Service Providers

The plan maintains that almost all of the increased caseload can be served by expanding the capability of existing health institutions, such as hospitals, health departments and voluntary agencies, and by increasing the participation of the nation's private physicians. (New delivery agencies would need to be created to serve less than 10 percent of the need.) Therefore, they say, the task is not to create "an extensive new family planning delivery system," but to "maximize the delivery of family planning through existing health agencies and channels." To meet the 1975 goal of providing services to 6.6 million low-income individuals, hospitals will have to carry almost four times their current caseload (from an estimated 0.6 to 2.3 million) and health departments just over twice their current caseload (from 0.9 to 1.8 million). Voluntary agency coverage will have almost to double (from more than 0.6 to 1.1 million), and private physician coverage go up to almost twice what it is now (from more than 0.7 to 1.4 million).

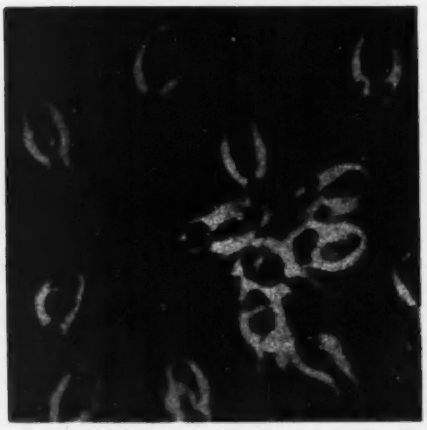
Manpower Needs

The five-year plan projects a need for about 90,000 family planning workers, exclusive of physicians, by 1975. The great majority of these nurses, administrators, aides and outreach workers will carry out their medical, administrative and educational functions part-time, with only about 6,500 working full-time in the field. Because the cost of comprehensive training for all 90,000 would be prohibitive, the plan observes, training programs should be aimed primarily at prospective full-time workers. These professionals would then be able to provide on-the-job training and guidance to the part-timers working with them.

To reach the level of services projected in the plan for 1975 will require in the neighborhood of 36,000 hours a week of physician time. This includes 28,500 hours in organized clinics and 7,500 hours in private practice. The plan states that this is only a fraction of the total amount of physician time available each week for all health services and should, therefore, put little strain on national resources of medical manpower. In addition to concern for sufficient numbers of staff to provide the level of services projected for 1975, the manpower development plan is aimed at upgrading the tasks of all workers, especially by bringing in new types of staff to free the highly trained doctor and nurse "to perform the functions for which they alone are qualified." One promising trend, the planners believe, is toward the greater use of paramedical staff for the more routine medical procedures.

Biomedical Research

Since even the most diligent and informed users of modern contraceptives experience failures in both timing and number of births, and since many find the current pills and IUDs unacceptable, science must develop new methods that are more effective and less prone to error or side effects, the plan notes. It therefore places a high priority on expanded biomedical research at all levels: basic research, goal-directed research and product development. At the present time, the plan states, the National Institute of Child Health and Human Development (NICHD) spends 53 percent of its population research budget on basic studies, 36 percent on goal-directed work



Living human spermatozoa, many times enlarged.

Family Planning Digest

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and 11 percent on product development.

Much more basic knowledge of the whole reproductive process is urgently needed in order to develop effective, safe, acceptable, reversible fertility control methods. "Such expansion of our basic knowledge," the plan states, "requires studies at the biochemical, genetic, physical, physiological and early development levels in both the normal and the pathological, in vivo and in vitro, in the vertebrate and the invertebrate." Some specific areas now under intensive examination include:

- neuroendocrinology, or the investigation of brain control of the pituitary hormones which in turn control sex gland function;
- reproductive hormones, especially the exact action of the pituitary hormones on the male and female sex glands, and also detailed analysis of the sex hormones themselves;
- biosynthesis of steroids, particularly as a part of the whole system of hormonal production and feedback control, to see how one or more steps might be inhibited without affecting other body functions; and
- biological measurement, or development of new and more precise biochemical measurement methods, to facilitate all levels of contraceptive research.

When basic research indicates a promising direction for future study, but does not yet define an exact medical technique, the next step is what the planners describe as "directed fundamental research." Some current study areas on this level include:

- *The oviduct or fallopian tube.* For pregnancy to begin, the egg and sperm must meet in the oviduct and the fertilized egg transported at proper speed to be implanted in a fully receptive uterus. A better understanding of how the oviduct functions could, therefore, lead to ways of disturbing its motility or secretions, thereby moving the fertilized egg along too slowly or too quickly, or creating a chemical environment hostile to sperm or egg survival.
- *The egg, before and after fertilization.* Rabbit eggs have been made resistant to sperm penetration, and this approach must be studied for human application. Once fertilized, the egg begins to divide into more and more cells. If this cell division could be inhibited, development would cease.
- *The corpus luteum.* This ovarian structure, formed after the egg leaves its follicle, produces the progesterone needed to maintain pregnancy. Disruption of its function, now being tested, could prevent implantation or even terminate an early pregnancy.
- *The sperm.* Basic research has shown that each sperm carries a hormone which may help it penetrate the egg. Inhibition of this hormone, either through a vaginal contraceptive or a male 'pill', might therefore prevent conception.

Noting that in the past few years no new contraceptive drugs have been marketed although the need for new ones is "very real," the plan puts priority on development of a once-a-month pill or injection, a postcoital drug, male contraceptives, reversible male and female sterilization, more efficient and safe IUDs and hormonal contraceptives, and more precise determination of ovulation in order to perfect the rhythm method.

Table 1. Ranges of Estimated Projected Costs for Population Research and Subsidized Family Planning Services by U.S. Nonprofit and Federal Agencies, 1970/1971*–FY 1975 (in Millions of Dollars)

Year	*Population Research Totals†*	*Subsidized Family Planning‡*					*Five-Year Totals*
		Delivery of Services	*Manpower Development*	*Operational Research, Planning and Evaluation*	*Information and Education§*	*Totals*	
1970/1971*	70– 80	140–175	7– 8	4– 5	3–4	154–192	224–272
FY 1972	80–100	200–230	8– 9	8– 9	3–4	219–252	299–352
FY 1973	100–150	250–285	8– 9	10–11	4–5	272–310	372–460
FY 1974	130–190	305–340	9–10	14–16	4–6	332–372	462–562
FY 1975	150–220	360–395	9–10	18–22	5–7	392–434	542–634

* July 1, 1970–June 30, 1971 for population research; January 1, 1970–June 30, 1971 for services.

†Totals for 1970/1971 and FY 1972 are estimates; for FY 1973–FY 1975 totals reflect projected ranges of estimated costs.

‡ Federal agencies and other national institutions and organizations in the United States combined.

§ Also includes population education activities authorized under P.L. 91–516 and Section 1008 of P.L. 91–572.

Source: *Report of the Secretary of Health, Education, and Welfare Submitting Five-Year Plan for Family Planning Services and Population Research Programs, October 12, 1971,* as prepared for the Special Subcommittee on Human Resources of the Senate Committee on Labor and Public Welfare, U.S. Government Printing Office, Washington, D.C., 68–1780, 1971, pp. 67 and 124a.

Behavioral Research

"The ultimate goals of population research," the plan notes, ". . . are to measure attitudes toward family size and preference in the use of contraceptive methods; to identify the consequences of various possible future population trends, so that informed choices among them may be made; to show how these trends might be influenced in a pluralistic society, without abridgement of individual freedom; and, ultimately, to build a scientific basis for population policy." Some of the major issues to be studied are:

- *Determinants of fertility.* These will include: the meaning of parenthood and how parental roles are learned; effects of family and peer group on attitudes toward sex and parenthood; the ways in which girls are prepared for the motherhood role; how decisions are made concerning family size and timing of children; the role of husbands in decisions on use or nonuse of contraception; agreement of husbands and wives on fertility-related decisions; attitudes toward the various methods of fertility control; alternatives to childbearing; attitudes toward sexual behaviour as these influence age at marriage, age at first conception, divorce and remarriage.
- *Analysis of trends.* Patterns which need study include: the nature and definition of differences in fertility among groups of people by income, education, religion, race and rural-urban residence; family size expectations, with definition of change over time; family trends; and incidence of abortion over time—all in an effort to understand not only the directions of the trends but the reasons for them and ways in which the trends can be influenced.
- *Consequences of population growth, structure and distribution.* Studies will be undertaken to examine the determinants of population change so as to begin to set reasonable population goals.

The DHEW planners acknowledge that hand in hand with research and service systems must go an informational and educational program with a twofold mission: to inform the target public of the availability of and reasons for family planning, and to enlist the public in support of family planning and population education programs. Efforts will be made to determine the role of the mass media and to survey the field to determine which informational and educational materials are available and which have been effective.

Finally, the planners are developing an evaluation system to enable the federal government to determine whether program objectives are being met, where adjustments may be necessary or emphases

changed, what is working well and what program elements need improvement and refinement.

Funding

The five-year plan calls for an increasing annual investment up to $392–434 million for FY 1975 for service delivery, manpower development, operational research, planning and evaluation and information and education, and $150–220 million annually for biomedical and behavioral science research by the same year (see Table 1). The plan proposes a "leadership role" for DHEW through its National Center for Family Planning Services (NCFPS) and its Center for Population Research (CPR), but clearly includes a partnership role for such public sector agencies as official state health departments and private sector nonprofit agencies, such as universities, hospitals, Planned Parenthood-World Population, the Population Council and the private foundations. The plan estimates that federal agencies have budgeted $147 million to support family planning services during FY 1972—or between 58 and 67 percent of the estimated total service cost for the year. In research, where CPR and the Agency for International Development are the principal funding agencies, the $48 million budgeted for this fiscal year by these two agencies is about 50–63 percent of the estimated FY 1972 cost.

Source

Report of the Secretary of Health, Education, and Welfare Submitting Five-Year Plan for Family Planning Services and Population Research Programs, October 12, 1971, as prepared for the Special Subcommittee on Human Resources of the Senate Committee on Labor and Public Welfare, U.S. Government Printing Office, Washington, D.C., 68–1780, 1971.

Morning-After Pill

1,000 Women Use Post-Coital Pill: No Babies

Effective morning-after contraception with "no serious adverse reactions" can be produced with a brief course of diethylstilbestrol (DES), a synthetic, nonsteroidal estrogen, according to a report by Dr. Lucile K. Kuchera that appeared in a recent issue of the *Journal of the American Medical Association*. Twenty-five mg of DES, given twice daily for five days, and beginning within 72 hours of coitus, prevented an estimated 100 pregnancies in 1,000 women of childbearing age treated at the University of Michigan Health Service.

Following the pioneering work of Drs. J. M. Morris and G. Van Wagenen on pregnancy prevention with morning-after estrogens in the mid-1960s, DES has been used on an empirical basis in some hospitals and university health centers. Dr. Kuchera's report, however, appears to be the first validating its use in a large number of women. Reviewing results of careful follow-up in all 1,000 women, she states that none became pregnant, although a 1960 estimate by Dr. Christopher Tietze put the risk of conception from a single unprotected coital act at between one in 25 and one in 50. [Dr. J. R. Udry of the University of North Carolina at Chapel Hill, applying the work of his colleagues there on fertility and timing, especially that of Dr. Peter A. Lachenbruch, indicated to *Family Planning Digest* that the risk of pregnancy from a single coital act has been estimated for each part of the menstrual cycle. On the basis of these calculations, he believes that the overall premedication risk among Dr. Kuchera's patients was about one in 10, making 100 probable pregnancies a "reasonable estimate."]

Dr. Kuchera began to accumulate her cases in 1967, with the last woman included in this report coming in for treatment in the spring of 1971. While most were college students, some were older women in the college community. For the great majority, potential risk, both in terms of contraceptive protection and time in the menstrual cycle, was high. Quite remarkably, only 11 percent of these educated women (or their partners) had used any contraception during the act of sexual intercourse preceding treatment; half of these had attempted coitus interruptus, which is known to have a high failure rate. A few had used a condom, jelly, foam or douche, and then had second thoughts about the effectiveness of these methods. Equally striking is the extent to which these women had unprotected intercourse at the time of the cycle when conception was most likely. In 715 patients sex occurred mid-cycle (from three days before to three days after the expected time of ovulation). Of the others, 180 had intercourse "not mid-cycle," 54 were irregular, nine had just stopped taking oral contraceptives, two were just postabortion and 40 were listed as unknown.

Before treatment, each woman was told that although DES was not a new drug it was a new use and follow-up would be needed. Possible side effects were described and the patient was advised that this was solely an emergency therapy, not to be used if she had "a continuing need for contraception." As a matter of course, all patients were referred to the University's regular contraceptive center, which provides all forms of contraception, including the IUD, and has a full program of sex education and medical examinations. While the majority seem to have taken the advice to heart, one-fifth came back again after one or more additional acts of unprotected sexual intercourse. Of these, 117 returned for a second course of DES, 65 for a third, 15 for a fourth or fifth and one for a sixth time. Dr. Kuchera noted that in recent years there has been an increase in the percentage of patients risking mid-cycle or completely unprotected intercourse, a development which she attributes to their knowing of the morning-after treatment.

Careful follow-up on all 1,000 women has shown that all menstruated within a month or so following treatment. Normal onset and flow was reported by 40 percent, 31 percent reported variations in onset or volume and 29 percent did not supply enough information beyond the fact of menstruation. Only 1.2 percent reported a small amount of vaginal spotting during or soon after therapy, in addition to regular menstruation.

None of the women receiving DES experienced what Dr. Kuchera felt were serious side effects. About one-third felt no side effects at all, and another 14 percent reported only "slight, hardly noticeable" nausea on the first day only. About 30 percent suffered from intermittent nausea, with or without vomiting, for one to five days. Much smaller numbers, about one percent each, reported such side effects as headache, dizziness, diarrhea, bloating, mild cramps, breast tenderness and weight gain, and a tiny scattering reported other temporary conditions possibly associated with their therapy. Side effects were unknown for about eight percent.

Danger in Use to Avert Stillbirths

It is of interest that the same drug, which in small doses soon after intercourse serves as a "morning-after" pill, has been used, in far larger doses and over a longer period of time, to prevent miscarriage and maintain pregnancy.

There is now growing evidence that such massive, long-term doses of DES may have very serious sequelae. Several recent reports indicate a strong association between vaginal adenocarcinoma in adolescent girls and the administration of DES years before to their mothers for maintenance of pregnancy.

These reports have led the FDA to advise physicians and drug manufacturers that pregnancy is now a "contraindication" to the use of DES or "closely related" compounds such as dienestrol, hexestrol, benzestrol and promethestrol because, "A statistically significant association has been reported between maternal ingestion of DES and the occurrence of vaginal carcinoma developing years later in the offspring."

One major difference between the two types of therapy is in the amount and duration of treatment. As described in a recent article in the *New England Journal of Medicine*, pregnancy maintenance involved, typically, a total dose of some 14,000 mg of DES from the seventh through the thirty-fourth week of pregnancy. This must be compared with a total contraceptive dose of 250 mg given over five days for postcoital contraception. Another difference is that the postcoital dose is given prior to any pregnancy—i.e., the egg is not yet implanted in the uterine wall.

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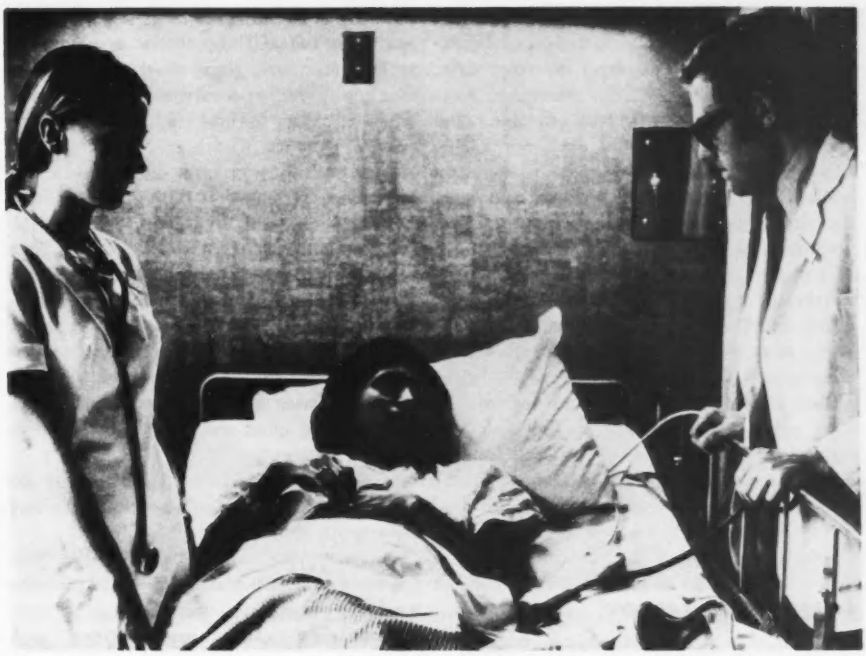

Women have been found to be especially receptive to family planning soon after giving birth.

Program Evaluation

Postpartum Program Approach: Pluses and Minuses

The use of postdelivery settings to recruit family planning patients characterized few early programs before April 1966, when the Population Council's International Postpartum Program was begun as a demonstration effort in 25 hospitals. By January 1971, the Program included 112 hospitals with a total of nearly 600,000 contraceptors on their rolls, and it is now the fifth largest family planning program in the world. The first two years of the Program are described in detail in a book edited by Dr. Gerald I. Zatuchni, the Program's former director. The major empirical findings from the Program and other postpartum efforts have recently been summarized by Jacqueline E. Forrest, a Population Council researcher. Miss Forrest points to two principal advantages of the postpartum approach:

- Women of proven fecundity who are not contraceptors are contacted promptly at time of delivery. In the more traditional field programs, recently pregnant women often are not contacted before they are pregnant again.
- Women recently pregnant appear to be more highly motivated to accept family planning than women not recently pregnant.

The postpartum approach has great potential for expansion and development, Miss Forrest says, for several reasons:

- Institutions which supervise the pregnancies and deliveries of women in urban areas have a high potential for effectiveness, since a number of surveys have shown that more than half the women delivering in these hospitals don't want any more children.
- While the proportion of women from rural areas who deliver and want no more children is less than 50 percent, KAP (knowledge, attitude and practice) studies show that a significant number do want family planning help. The extension of maternal and child health services, with professional supervision of deliveries, into rural areas would provide a significant opportunity to implement an effective postpartum approach.
- It has been shown that women are much more likely to return after delivery for a postpartum check if family planning is offered at the same time. Thus, the introduction of family planning services can help raise health standards.

Principal results of the Program were:

- There has been an increased use of contraception by women visiting the participating hospitals. For eight non-U.S. and seven U.S. hospitals that had some kind of family planning services before becoming part of the Program, contraceptive acceptance increased 110 percent, from 16.9 to 35.4 percent in the first two years. An 80 percent increase was noted among the U.S. participants and a 144 percent increase in the non-U.S. hospitals.
- The Program contributed to a reduction in the birthrates of contraceptive acceptors, according to studies cited of acceptors compared to nonacceptors in Washington, D.C., Atlanta and Singapore. The Population Council estimates, on the basis of its Worldwide Follow-up Survey of 1970, that fertility among women who had accepted contraception three or more years earlier, had been reduced by about 75 percent (through a 68–71 percent decline in the pregnancy rate plus fetal wastage—much of it presumably through increased pregnancy termination).
- One major factor in gaining new acceptors has been word-of-mouth communication. Forty-seven percent of acceptors interviewed in the 1970 follow-up survey said they had heard about the Program from friends or relatives. Two-thirds of participating women who had not been reached at delivery cited friends and relatives as their source of information.
- Although acceptance rates in the Program are still high, they have declined from their early levels—from a high of 42.2 percent in 1967 to 27.0 percent in 1970. Miss Forrest finds this largely related to the discontinuance in the Program of some hospitals with very high acceptance rates and the entrance of new hospitals with lower than average rates. For example, the U.S. hospitals, with very high rates of acceptance, have continued the program on their own without Population Council support, and some major programs in India and Singapore have been absorbed into those countries' national programs. Emphasis in recent years has shifted from hospitals with very large maternity services to smaller hospitals and clinic-hospital networks.

About half of the hospitals in the Program provide immediate insertion of IUDs after delivery to patients desiring this method. Such immediate insertion has been found to be safe and effective, despite high rates of initial expulsion. The main gain is to give a woman a modern method of contraception "before she has the chance of failing her postpartum appointment and thereby missing the opportunity for contraceptive service," Miss Forrest points out. The main cause of discontinuation of IUDs in the Program is removal rather than expulsion; this applies equally to those who have the IUD insertion immediately postpartum and those who wait until a later time. The risk of pelvic inflammatory disease was not found to be greater among those women who had the insertion immediately after delivery than among those whose insertions were at a later time.

Acceptors Are Younger

Acceptors in the International Postpartum Program tend to be younger than contraceptive patients in the various national programs; and those who receive contraception after contact at delivery are younger than those who come to the Program from other sources. Median age at acceptance of contraception is estimated by the Population Council at 28.1, based on its Worldwide Survey; among those who received contraception at delivery, the median age was 26.7; among those who came from other sources, the median age was 28.6. In nonpostpartum programs in developing countries the median age of pill and IUD acceptors has ranged from 28 to 34 years (compared to 26 years for pill acceptors and 28 years for IUD acceptors in the Postpartum Program).

Retention Rate High

Data from the Worldwide Survey show that 71 percent of women in the Program were still using their initial method of contraception 12 months after acceptance. Seventy-nine percent continued on contraception for at least 12 months, though some switched methods. Continuation rates among Program acceptors are higher than for most national programs, even though participants in the Postpartum Program are younger than those in national programs. Two-thirds continued contraception for at least two years; fifty-three percent continued after three years and 43 percent after four years. Continuation rates were higher for those who initially selected IUDs than for those who began with pills. Thus, about half of those who started with IUDs were still contracepting after four years, compared to just over one-fourth of those who began on pills. This appears to be related to the greater age and higher parity of the IUD acceptors as compared to the pill users, since most studies show that older, higher-parity women are more persistent and faithful contraceptors than younger women who are of lower parity.

The Follow-up Survey data show, however, that continuation rates of women entering in the later years of the Program are lower than for those who entered in the first two years. This is attributed to three factors: a change from heavy reliance on the IUD to more dependence on the pill, introduction of new programs and new countries to the Program and the finding that "later acceptors apparently have less drive to continue using contraception than early acceptors."

Miss Forrest concludes that although the Program has "grown dramatically" and "fulfilled many of its early objectives . . . it would appear that the limits of the Program as a demonstration effort have been reached." The Population Council is now "encouraging other organizations and countries to enter the postpartum field . . . and initiate the postpartum approach in countries and hospitals not now using it."

Sources

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APHA Roundup—1971
On Family Planning

- To what extent do the nation's largest cities provide special programs for unwed pregnant teen-agers? Do such programs affect the subsequent contraceptive behavior of this group?
- What relationship, if any, does family planning have to the reduction of infant mortality?
- To what extent do low-income women practice contraception? Where do they go for family planning services and have there been changes in their attitudes and practices over time?
- What are some essential first steps in bringing a mobile family planning clinic to rural communities?

These are some of the questions and issues explored by the physicians and nurses, statisticians and sociologists, systems analysts and program administrators who presented papers on family planning at the 1971 annual meeting of the American Public Health Association held October 10–15 in Minneapolis. Other relevant papers on health maintenance organizations, on comprehensive health care and on free clinics serving young people were also presented.

Pregnant Teen-Agers Need More, Better Aid

Concern over the personal and societal consequences of out-of-wedlock pregnancies among teen-agers led a team of investigators headed by Dr. Helen M. Wallace from the University of California School of Public Health (Berkeley) to explore the scope and extent of community efforts to deal with this problem. In the fall of 1970, they sent a seven-page survey questionnaire to the health officers and superintendents of schools of the 150 U.S. cities with populations of 100,000 and over, following up the original mailing with four subsequent ones during the winter and spring of 1971. Responses covering both the health and education departments were received from 130 cities, or from 86.7 percent of the total.

Analysis of the responses showed that 111 cities reported that they provided a special program of some type for teen-age pregnant girls.

Contraception, which, the investigators note, should "have high priority in services furnished to sexually active teen-agers," was provided in only 65 programs —about half of the special programs— with 12 other services having higher priority. A total of 77 cities reported that contraception was available for teen-agers, while 49 cities reported that it was not.

Knowledge about the population in need, even in the 111 cities which provided services, was described as spotty and incomplete. Almost half the cities were unable to provide information on the population in need of services or number of live births to girls under 20. Only one-quarter of the cities were able to provide more than partial information. The smaller cities had more difficulty than the larger ones in providing vital statistics. Only one-third of the cities with special programs were able to provide complete information on the total number of girls served; additionally, just over half were able to provide some but not all of the information. About one-eighth of the cities claiming to have special programs were unable to provide any information on the numbers served.

Only nine of the 111 cities reporting special programs cared for 500 or more girls a year; while 48 cities reported that they served fewer than 100 girls a year, and 44 cities served between 100 and 499.

Government as well as voluntary agencies sponsor and fund the special programs. Education, health, and welfare departments, Maternity and Infant Care Projects, Model Cities programs and the Office of Economic Opportunity provide the public support, while 'Y's, Planned Parenthood, maternity homes, medical

schools and United Funds provide voluntary agency support. The most frequent source of funds is the public education department. "This may indicate," the investigators noted, "a low priority given to this problem by the health sector." Sixty-five cities provided budget figures for the special programs. Of these, 37 reported that they spent less than $100,000 and 10 said they spent under $200,000. Only 18 cities budgeted between $200,000 and $1 million. More than 40 percent of the cities with programs reported that they had no budget figures available.

The most frequent services provided in the special programs were counseling, social services, special education, special health classes and instruction in family life education, provided in 89–101 programs. The least frequent services provided were day care for infants, special services for fathers, maternity home care and pregnancy testing. Pregnancy termination was provided in only 23 of the programs, pregnancy testing in 50 programs. Restrictions on contraceptive services to teen-agers were common: 57 cities reported that parental consent was required; 24 that they had an age restriction; 23 that there were legal restrictions. Eighteen cities reported that a prior pregnancy was a required 'ticket of admission'; 14 insisted that the teen-ager be married; 11 required payment of a fee, and four a financial eligibility test.

The investigators concluded that these left many needs unmet or only partially met. Noting that the pregnant teen-ager represents an especially high-risk group in the community, the investigators observed that "planning for more adequate services should have a higher priority in future health and education programs."

Many communities still make access to birth control difficult for teen-agers without parental consent.

Education Key to Less Teen-Age Pregnancy

Two groups of unmarried pregnant teenage girls (under 17 years of age) enrolled in special multiple service programs in New Haven and Hartford were studied prospectively by Dr. James F. Jekel and colleagues from Yale and Brandeis Universities in an effort to determine which of a number of variables appeared to be related to repeat pregnancies among these young women. The two programs provided high school education, social services and medical services, including family planning. The stated goals of these programs were: "to carry these young women through pregnancy, delivery, and the immediate postpartum period in good health, to insure a healthy baby and continued education, to assist [the young women] to avoid unwanted pregnancies, and to give needed social and psychological support, so that their experience not only would not penalize them for the rest of their lives but, when possible, could even become a maturing experience."

Both programs provided medical care for their clients. In New Haven care was provided at a special clinic where continuity with the same nurse-midwife or obstetrician was featured; in Hartford, the teen-agers were referred for care to three hospitals and a private obstetrician. Family planning was strongly emphasized in the New Haven program; in Hartford, it was emphasized to varying degrees, with a visiting nurse providing education in family planning, which could then be obtained from the hospitals and physician.

The educational programs were similar, but the New Haven program accepted some junior high school students, while the Hartford program concentrated on ninth through twelfth graders. The social work component of the Hartford program was school-based, while that of the New Haven program was hospital-based, and was more traditional in its approach.

These differences notwithstanding, the life status of the girls at 15 months postpartum was very similar. Sixty-seven percent of the New Haven girls were either still in school or had been graduated compared with 77 percent of the Hartford girls; 40 percent of the New Haven girls and 49 percent of the Hartford girls were employed; 19 and 18 percent, respectively, experienced a subsequent pregnancy; two-thirds of each group was on welfare; 17 percent of the New Haven group and 11 percent of the Hartford group was married. The investigators concluded that "there is no clear basis for saying that either program was superior to the other. . . . A variety of multiservice programs for pregnant school girls, when staffed by dedicated people, can provide the needed opportunities. . . ."

A significant finding, however, is that of more than 100 independent variables studied in the New Haven program only a few showed a significant association with repeat pregnancy. The investigators observed: "Those who were in school or had graduated tended not to have repeat pregnancies; those who married tended to repeat quickly." Thus, in the New Haven program, 84 girls were either still in school or had been graduated at 15 months postpartum. Of these only nine percent had a subsequent pregnancy. Of 41 girls who dropped out, 43 percent had a subsequent pregnancy at 15 months postpartum. Of 20 girls who married, 44 percent became pregnant by 15 months postpartum, while among the 105 girls not married, only 18 percent were pregnant.

The investigators found that conscientious adherence to a contraceptive regimen was also correlated with whether or not a girl remained in school. There was a higher correlation of consistency in this group than among girls who dropped out or were married.

Family Planning Can Cut Infant Mortality

Although it has been widely accepted in the medical community that the timing and spacing of births affect both infant and maternal mortality and health, the precise impact of family planning on infant mortality thus far has not been pin-

pointed. Exploring this problem, Dr. Nicholas H. Wright of the Population Council, finds that "under optimal assumptions of family size, spacing and timing of first births, infant mortality might be reduced as much as 30 percent. Under family limitation assumptions alone, however, the potential direct reduction through family planning services is about 10 percent. . . ."

Examining the decline in infant mortality between 1940 and 1970, the investigator noted that in the decade 1940–1950 there was an almost 20–25 percent decline in infant mortality, which then slowed to a 10 percent decline between 1950 and 1955. In the next five-year period, the decline slowed even further, to less than two percent. Then, in the 1960s, the rate of decline began to go up again, to five percent from 1960–1965, and almost 20 percent for the period 1965–1970. This occurred despite that fact that a number of developments might have been expected to work against such declines: The number of out-of-wedlock births increased 50 percent during the 1960s, and these clearly have been shown, the investigator points out, "to carry a much higher risk of mortality in the first year of life." In addition, from 1960 to 1968 women were having babies at especially early ages, which generally is associated with higher infant mortality risk.

Despite these limiting factors, however, other developments clearly contributed to the increased decline of infant mortality. Among these, the investigator explains, were:

- Impressive advances in educational attainment were made between 1960 and 1970. The proportion of the white and nonwhite population 20–24 years old who had completed at least four years of high school increased 24 percent and 63 percent, respectively.
- Nonwhites increased their constant dollar family income at twice the rate of whites in the 1965–1970 period (despite a decline of constant dollar income for both groups between 1969 and 1970).
- Maternity and Infant Care projects were initiated and funded. These programs, which, the investigator believes, affect infant mortality rates by providing low-income mothers with prenatal and delivery care and infant care during the first year of life, reached increasing numbers of low-income women from the mid-1960s on.
- Although the lower birth order distribution in the 1960–1968 period might have contributed to overall lower infant mortality, this effect could have been offset by the lower maternal age at birth registered in the same period.
- The total number of live births in 1960–1970 declined. While one can only speculate about the effect on infant mortality of the significant decline of almost 15 percent, the investigator observes, "surely a reduction of almost 15 percent in total births has implications for the quality of prenatal, delivery and postnatal care if these resources were strained by larger birth cohorts earlier."
- Legal termination of pregnancy became more accessible. "This development is likely to have contributed to the favorable infant mortality trends by reducing the number of 'unwanted' births."

Spacing pregnancies helps reduce infant deaths.

With this as the framework, Dr. Wright then examined the potential effect on infant mortality rates if both the total number of births and the maternal age at which births occurred were both perfectly controlled. Applying this approach to the 1960 birth cohort, he found that if there were no more than three births there would have been a 10 percent reduction in the infant mortality rate.

Another set of assumptions yields an even higher percentage reduction: The total number of births is limited to three, but all are to occur at the two most favorable maternal age segments. Only women 20–34 are to have births at orders one, two and three. But women over 30 are not allowed a first birth, nor are women under 25 allowed second and third order births. In this way, the effects of optimal birth timing and spacing are added to family limitation. With this model, expected infant mortality rates were calculated and compared to actual rates from a study of 1960 birth cohorts, and it was found that "the potential reduction of the infant mortality rate for whites and nonwhites was 29 percent."

What are the family planning program implications of these theoretical findings? What strategies will be necessary if family planning services are to influence infant mortality more significantly in the 1970s? Dr. Wright recommends the following:

- expanding of services in a variety of settings to reach the large numbers of couples still needing them,
- confronting the problem of "unhealthy timing of early births, particularly the first, among young women," by finding effective ways of reaching young people with pertinent information and services before pregnancy occurs, and
- providing pregnancy termination referral or services when desired to prevent unwanted births.

Low-Income Women Seek Best in Contraception

Mecklenburg County, in North Carolina, has had a publicly supported family planning program in continuous operation since the early 1960s. Since 1967 a series of evaluative studies of the program have been made by University of North Carolina researchers in an effort to detail the need for and utilization of this particular public health service. The latest such study, by a team of investigators headed by Dr. Earl Siegel, focused on changes relevant to family planning over the period 1967 to 1970–1971. In 1967, 800 women aged 15–44 and living in 23 low-income census tracts in Charlotte, were interviewed to determine, among other things, their knowledge, attitudes and practices in regard to contraception, and their desires concerning family size. Between the fall of 1970 and spring of 1971, 605—or 75 percent—of the women were reinterviewed (the rest moved or could not be located). Among the more striking findings:

- A large proportion of the women had become sterile, 32.6 percent in 1970–1971 compared with 17.2 percent in 1967. Most of this appeared to result from sterilizing operations, either tubal ligation or hysterectomy, "rather than the more difficult to validate reasons of menopause or sterility due to infection," according to the study.
- Mistimed or unplanned pregnancies continued to be a problem among a significant proportion of the women. Twenty-three percent, who in 1967 said they wanted no more children, had children in the intervening period. (This is a lower proportion than the 37 percent of poor or 32 percent of near-poor married women reporting such failures in the 1965 National Fertility Study.) Forty-five percent of the women who wanted more children, but not for five years or more, experienced a timing failure—that is, a child or children born sooner than that time. Almost 30 percent of those who said they wanted no children within five years had a number or timing failure.

• Those most likely to have a number or timing failure were women who desired more children at some time, those who were unmarried in 1967, the unemployed, those who in 1967 had less than 12 years of education, or who were black.

• Of those using the pill or IUD in 1967, a somewhat larger proportion had unwanted children than those not using contraception regularly at that time, according to the investigators. However, there appeared to be limited continuity over the four years in use of medical contraception, with about half the women who used pills or IUDs in 1967 still using them three and one-half or four years later.

• On changes in contraceptive use over time, it was found that those who "improved" their contraceptive practices most were women not married in 1967, those who had been teen-agers in 1967, women with less than 12 years of education, black women and the unemployed. To assess improvement, scores were assigned as follows: five for tubal ligation, four for regular use of the pill or IUD, three for condom or diaphragm, two for any other method and one for no regular contraceptive use.

• Family size desires appear to have changed over time. The investigators found that 30 percent of 358 women for whom a change in desired family size could be computed reported they wanted more children in 1970–1971 than they wanted in 1967. While this would reduce the proportion of mistimed or unwanted births reported above, the investigators explained that some women might be "less willing than others to label a pregnancy unwanted" which had already occurred.

Do Blacks Have Less Access to Private MD?

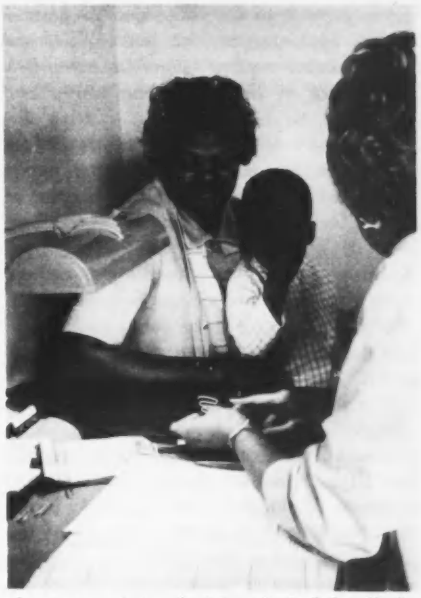
Although a majority of low-income white women just as of low-income women from various ethnic minorities utilize contraception, the sources of their care are strikingly different. Among the poor and those whose incomes are marginally higher, white women utilize the services of private physicians more often than black and Spanish-speaking women from the same income group who are more apt to go to clinics. This is true even when the clinics are equally accessible to both the white and ethnic minorities.

These are some of the findings of a study by Planned Parenthood-World Population's researchers, Richard Pomeroy and Aida Torres, of the family planning utilization of 1,351 low-income women living in Grand Rapids, Michigan and Albuquerque, New Mexico. The sample was drawn from poverty-designated areas which had family planning clinics within their boundaries. In Grand Rapids, 42 percent of the whites and 61 percent of the blacks were poor; in Albuquerque, 38 percent of the whites and 67 percent of Spanish Americans were poor.

Although the majority of both white and minority group women were either past or present contraceptors, a substantial minority reported that they had never used any contraception. In Grand Rapids more than 30 percent of the whites and 40 percent of the blacks said they had never done so; in the southwestern city, however, just over 16 percent of whites had never used contraception, while among Spanish Americans there the figures rose to 37 percent.

More than seven of every 10 women who were using contraceptives at the time of the survey were using the two most effective methods: the pill and the IUD, both of which require a doctor's prescription. Thus, in Grand Rapids 73 percent and 67 percent of poor and slightly higher income whites, respectively, who were current contraceptors were using the pill, as were 82 percent of poor black and 61 percent of slightly higher income blacks who were current contraceptors. In Albuquerque, 40 percent of poor and 66 percent of slightly higher income white current contraceptors were on the pill, compared with 58 and 55 percent of poor and slightly higher income Spanish-American current contraceptors.

The investigators found that white women who used a medical method of contraception, for the most part, were more likely than those of the ethnic minorities to get their prescriptions from a private physician. Thus, 67 percent and 94 percent of poor white women and those of slightly higher income currently using medical contraception in Grand Rapids used the services of a private physician. Among blacks, however, only 32 percent of the poor and 67 percent of the slightly higher income group went to a private physician. They depended much more on clinics than did their white counterparts of either economic group. In Albuquerque, half the poor whites using medical contraception obtained their family planning services from a private doctor, half from a clinic. But almost nine out of 10 higher income whites in the southwestern city obtained services from private physicians. Among Spanish Americans, too, the higher income medical contraceptors used private physicians more often than clinics, with eight of every 10 reporting they did so, while among the Spanish-American poor just under half did so. The investigators observed that "medical contraceptors . . . served by private physicians, regardless of level of medical indigency, are more likely to use the pill and less likely to have the IUD or diaphragm prescribed than those who attend public clinics." To some extent, this is consistent with the thesis, they maintain, "that the family planning service provided the medically indigent [and even those of slightly higher income] by private physicians is primarily the result of contact with general practitioners who are less likely to be trained in modern birth control techniques."



Access to private physicians limited for blacks.

Among other significant findings of the study:

• Although similar percentages of all groups were in need of contraception, significantly higher percentages of the minority groups were at risk of pregnancy and were not obtaining birth control services from any source. Thus, while roughly one-quarter of white women in Grand Rapids were not using any family planning method, almost half of the black women were not. In Albuquerque, while between 12 and 29 percent of white women were without family planning, 35 to 46 percent of Spanish Americans were not using any birth control. Thus, the minorities were at far greater risk of having unwanted pregnancies than white women.

• Women whose incomes were slightly higher than the category described as "poor" were at generally greatest risk (that is, they were sexually active, fecund, not desiring pregnancy and using no method) of having an unwanted pregnancy. Thus, among blacks in Grand Rapids, 34 percent of the slightly higher income women were at risk, compared with 29 percent of the poor. In Albuquerque, 19 percent of the whites and 24 percent of the Spanish Americans in the higher economic group were at risk, compared with

seven percent of the white and 22 percent of the Spanish-American poor. When the type of contraceptive usage was examined, 11 percent of higher income whites and blacks in Grand Rapids were using the nonmedical methods of contraception, which are less effective, compared to six percent of poor whites and four percent of poor blacks. In Albuquerque, seven percent of higher income as well as poor Spanish Americans used nonmedical methods; while a much smaller proportion (10 percent) were using nonmedical methods compared with poor whites (22 percent).

The investigators conclude, "In effect, it is their far greater use of public family planning services that seems to account for the slightly more effective contraceptive practices of the poor. On the other hand, it is the relative lack of patronage of the private physician that puts the minorities at a comparative contraceptive disadvantage with the whites. Although at each income level the nonwhites are more likely than the whites to use public birth control services, the whites more than compensate for this by their considerably greater use of the private physician."

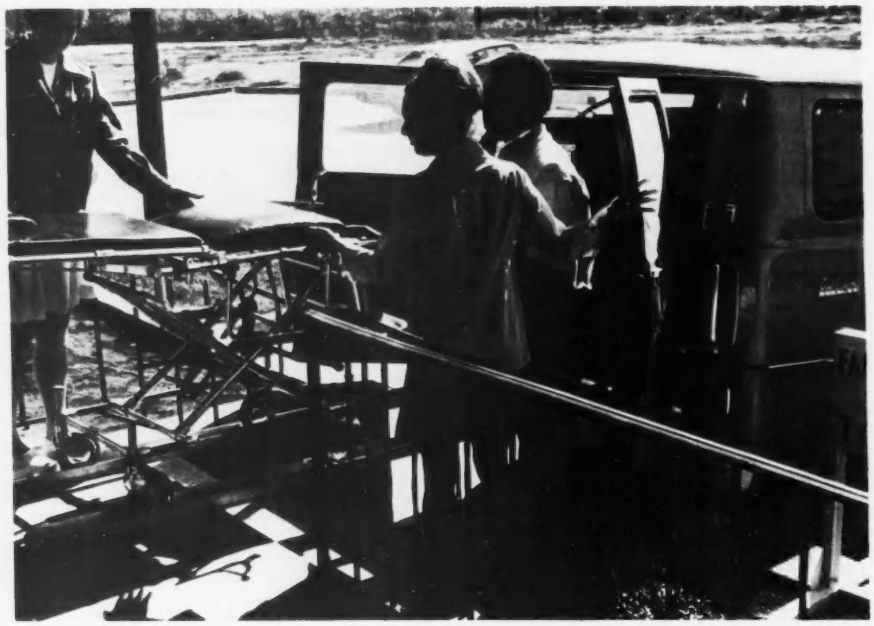
Mobile Clinic Reaches 6,000 Oklahoma Poor

The old-time country doctor making his rounds by horse and buggy is not obsolete. His lineal descendant is the team of specialists in the mobile van delivering family planning to women in rural areas who might otherwise be without this vital health service. One such mobile team, operating in 625-square-mile Tulsa County, in northeast Oklahoma, serves some 6,000 women a year in 42 clinic sessions a month at 21 different sites in the 10 small towns which, with Tulsa, make up the county.

The three ingredients crucial to the success of the Tulsa mobile program, according to Estelle Antell, Region VI Program Management Officer of DHEW's National Center for Family Planning Services (NCFPS), were:

- careful site selection,
- thoughtful staff recruitment, and
- community involvement.

The neighborhoods where low-income women live were identified with the help of the Community Action Program (CAP agency), Ms. Antell explained, and within the neighborhoods, public buildings were sought for the clinic that might be available at no cost. The buildings had to have heat, electricity, running water, at least one room with a door (for an examining room), an indoor bathroom, a parking area for the van and a minimum number of steps to carry equipment up and down. Simple as these criteria sound, it was not easy to find public facilities with these amenities. In poverty areas, Ms. Antell observed, buildings are apt to be poor, too. In one town, the only available space was the elementary school; it was the only building with running water. The auditorium was used for the clinic, and curtains were drawn on the stage to provide a private examining room. In some communities, the Park and Recreation Department provided suitable sites; in others the county health department loaned the local health center facility to the family planning program. Among the most successful locations, from the point of view of patient acceptability, Ms. Antell reported, were the churches. These conferred "instant respectability" upon the program, since they were trusted by the neighborhood people and had been part of the community for a long time.



It takes the Tulsa family planning team only 10 minutes to set up a complete clinic on a chosen site.

Main Staff Qualification

The primary qualification of a staff that will man a mobile clinic is flexibility, being able to "shift gears figuratively and literally," according to Ms. Antell. Since the Tulsa clinic operated at two locations a day, four days a week, it meant that twice a day the work area changed. "Persons who need the security of repetition cannot function well in such a situation," Ms. Antell emphasized. The ten-man staff (consisting of a physician, nurse, a licensed practical nurse, a laboratory technician, a social worker, nutritionist, receptionist, two intake workers and a bus driver-janitor) can unload the van, set up an examining room, laboratory area, two intake areas, reception table, waiting room, and even playpen and toys in 10 minutes, Ms. Antell reported. All nonprofessionals were recruited from the neighborhoods and were usually suggested by officials whose building was being borrowed, thus initiating local involvement in the program. (Backup staff included five outreach workers, one outreach supervisor, an administrator, secretary, bookkeeper and two records clerks.)

Community Involvement

Since every physical facility borrowed for the clinic has a staff of its own, involving such staff in the program has positive consequences, Ms. Antell pointed out, and ignoring them can imperil the program. Unless the staff supports the program, the mobile clinic can find the parking space in front of the door taken, the telephone out of order, the heat turned off, the bathroom tied up or, as once happened in a recreation center, a rock band scheduled to rehearse next door to the examining room.

Virtually all community action programs have consumer boards, according to Ms. Antell, and it was from these boards that the family planning program obtained permission to use various facilities. It is to these boards that the program reports regularly on performance at the site utilized. Several of the family planning neighborhood workers have been invited to join these boards since the family planning program began.

"In order for a mobile program to work, staff, equipment and patients must arrive at the same place at the same time," Ms.

Antell emphasized. Even the most minute tasks must be made someone's responsibility and not be left to chance. Since everything from cotton balls to buckets with canned ice to transport blood samples, from pills and patient records to tenaculums and temperature charts—in short everything used in a freestanding clinic—must be carried from place to place and replenished regularly, careful planning is the key to an orderly program.

Patient records are kept in the Tulsa office except when they are needed on clinic days. Patients are encouraged to get in touch with the office for any reason, and an answering service is on duty for evening and weekend callers. At the initial visit, the patient is given an addressed, stamped postcard with her clinic number on it, and is instructed to mail the card when her birth control supplies are running low. The same day the card is received, Ms. Antell noted, the product is wrapped, another postcard is enclosed (with an appointment reminder if that is due soon) and a copy of the *Family Planning Flyer*, the monthly newspaper, are sent to the patient. "If the post office is efficient," Ms. Antell observed, "there should be only a two-day interval between the time she mails her card and the time she receives her supplies."

Sources

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E. G. Antell, "The Successful Delivery of Comprehensive Family Planning Services."

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R. Pomeroy and A. Torres, "Family Planning Practices of Low Income Women in Two Communities."

E. Siegel, D. Thomas, E. Coulter, W. Hern, "Family Planning: Changes in Attitudes and Practices Among Low Income Women Between 1967 and 1970."

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N. H. Wright, "Some Estimates of the Potential Reduction in the United States Infant Mortality Rate by Family Planning."

Research

Prostaglandins: New Birth Control Hope or Headache?

As the 1960s was the decade of the oral contraceptive in the field of family planning, some scientific reports published since 1970 have suggested that this might well become the prostaglandin decade. These ubiquitous fatty acids, 14 of which have thus far been identified, are the first known pharmaceutical preparations to interrupt pregnancy in both very early and late gestation. They are a potential addition to the pharmacopoeia involved in the reproductive process since they may also be effective, like oxytocin, in inducing labor at term and in inducing menstruation.

During the past 18 months, scientific researchers in several countries—at Makarere University in Uganda, at the Karolinska Institute in Sweden, at Oxford University in England, and at Yale, the University of North Carolina and the University of Southern California—have conducted clinical trials to terminate pregnancy, to induce labor and to bring on menses, using varying dose levels of two prostaglandins—PG F_{2a} and PG E_2—and various routes of administration—intravenous, intravaginal, intrauterine, intraamniotic and even oral. They have also attempted to replicate each other's findings. One consequence of all this activity has been to temper somewhat the enthusiasm that greeted the initial reports on the efficacy of the compounds. Results are far from uniform: Reported success rates in terminating pregnancy range from 10 percent to 100 percent; side effects have not only varied in intensity, but more serious ones have been observed since the initial reports; replication of study design has thus far yielded quite different results. It is against this background that Dr. S. M. M. Karim, of Makarere University, one of the world's leading researchers in the use of prostaglandins, observed at a meeting in June that "we are now beginning to realize the limitations of prostaglandins, having been through a period when their potentials were wildly exaggerated."

Potent as they are in relation to the human reproductive system, prostaglandins have wide-ranging physiological and biochemical effects on other of the body systems as well, a recent report by Dr. Bruce Phariss of the Alza Corporation, a pharmaceutical company, emphasized at a recent medical meeting. In the cardiovascular system, prostaglandins "can increase or decrease systemic and pulmonary blood pressure, control regional blood distribution and alter platelet [a blood component] adhesiveness," among other effects. They have been shown, he notes, to cause phlebitis (inflammation of a vein) and hypertension or hypotension, as well as transient headaches. "These effects definitely would cause concern in cases where there was a history of cardiac abnormalities, migraine headaches, capillary fragility, phlebitis or any other circulatory problems," according to the scientist.

The effects on the renal-pulmonary system are also significant, altering both the excretion of various chemicals and airway resistance in the bronchial tree. It would be important, he says, to exclude from prostaglandin therapy women with "histories of or potential for such renal or pulmonary problems as acidosis, alkalosis, uremia, ionic imbalance, asthma or emphysema," until more is understood about the effects of prostaglandins on these two systems.

Noting that pronounced bouts of nausea, vomiting and diarrhea have been ascribed to the E and F prostaglandins and that the former is known to decrease certain secretions by the stomach, he recommends that problems associated with the appendix, intestine or digestive process should be considered in the safety of prostaglandin use.

The metabolic and central nervous systems, too, appear to be altered by prostaglandins in ways not completely understood, and prostaglandins have been shown to cause sedation, catatonia and inhibition of spinal reflexes as well as long-lasting elevation of intraocular pressure and contraction of the pupil. A recent British study suggested that one of the prostaglandins, E_2, "may play some part in the etiology of open angle glaucoma." They are, therefore, contraindicated for glaucoma patients, according to Dr. Phariss, and little is known about the implications in patients predisposed to diabetic retinopathy, retinal detachment or other eye complications where pressure changes could have pronounced effect. The physician concludes, "The problem in employing prostaglandins for any therapy then becomes one of creating adequate concentrations of prostaglandin in the needed area without overloading the ability of the body to protect nontarget tissues. . . . In relation to fertility control, we need to know the target organ, the minimal active concentration at this organ, whether a pulse exposure is more effective than a constant level and which prostaglandin results in the most selectivity for the particular effect in mind."

The Swedish Experience

Against this background, recent clinical reports on prostaglandins in fertility control take on added interest. Using PG F_{2a} to induce termination in early and late gestation, a research team at Sweden's Karolinska Institute reported that in one

group of 69 patients given the prostaglandin intravenously, 91 percent of pregnancies in the first eight weeks of gestation were interrupted successfully, following an infusion period of about seven hours. In contrast, only 10 to 30 percent were terminated in later stages of gestation (ninth to sixteenth week), in spite of the fact that the duration of the infusion was doubled. Dose schedules, too, were tested on another 57 patients to determine the level necessary to induce interruption with a minimum of side effects. It was found that in the relatively low-dose group, only 18 percent were terminated. In the group in which the dosage was doubled, the success rate increased to 83 percent. The investigators contrasted these results wih those reported by Dr. Karim and his colleagues from Uganda. There, low-dose intravenous infusion resulted in an 88 percent success rate. Karim's success rate was also far higher than the 53 percent reported by 13 participants in a WHO meeting in Stockholm in March 1971, according to the Swedish scientists. The reason for this difference was described by them as "difficult to explain."

All investigators have reported nausea, vomiting, diarrhea and erythema (redness and swelling) at the site of puncture, and the level of reaction seems to the Karolinska group and others "unacceptable." Summarizing the experience with intravenous administration, researchers from the University of North Carolina Medical School noted recently, "It appears that we cannot expect the maximum usefulness from these drugs when they are administered by the intravenous route. Because about 90 percent of the drug is inactivated during the initial passage through the pulmonary circulation, excessively high doses resulting in complications are required. . . . The logical next step is to investigate abortifacient activity . . . by administration into the uterine cavity." This route was considered more promising.

Intrauterine Route Promising

Intrauterine administration requiring only one-tenth the dosage of intravenous infiltration, was tested in 31 cases in Stockholm. The duration of treatment varied from two to 18 hours, with the majority of terminations occurring in about eight hours. Eighty percent of early pregnancies (fewer than nine weeks) were terminated successfully, compared to 65 percent of later pregnancies. The longer the duration of pregnancy, the longer the treatment period needed to achieve termination. The side effects were considerably reduced by the intrauterine method. British researchers, too, have reported successful termination of pregnancy via the intrauterine route in 14 of 15 cases, with minimal side effects.

In recent months, in a variety of forums, Dr. Karim and his colleague Dr. S. D. Sharma have reported several other promising developments in the administration of prostaglandins. In 10 women, from 13 to 22 weeks pregnant, a single intraamniotic administration of PG E_2 or F_{2a} stimulated the uterus to contract and resulted in termination in every case, they reported in a communication to *Lancet* (although two women required manual removal of the placenta). The prostaglandins were administered through a catheter into the amniotic cavity. This method does not require withdrawal of amniotic fluid. The injection-termination interval, they reported, ranged from four and one-half hours to 18 hours, with a mean of 11.4 hours. The only side effects noted were nausea in four women and vomiting in three.

Drs. Karim and Sharma also reported the first use anywhere in the world of prostaglandins in tablet form. They were given orally to 100 patients at term (between 35 and 44 weeks) to induce labor. This, they say, was done successfully with 79 of 80 patients given PG E_2 tablets and in 16 of 20 women treated with PG F_{2a}. The average induction-delivery interval for the first group ranged from three hours for three women to 20 hours for 20 women. In the PG F_{2a} group, five women who failed to respond were then given E_2 and went into labor. The average induction-delivery interval in the 15 successful cases was 23 and one-half hours. Side effects, according to the report, were minimal in all cases.

Dr. Karim also developed vaginal tablets to induce menses in women of proven fertility who had unprotected coitus in mid-cycle and had failed to menstruate at the expected time. These tablets, consisting of 20 mg PG E_2 and 50 mg F_{2a}, were administered to 12 women whose menstrual period was from two to seven days late. Eight of them had had a positive pregnancy test. Two tablets of one or the other prostaglandin were inserted four hours apart in the posterior fornix (cavity) of the vagina. According to Dr. Karim, in 10 of the 12 women "menstrual-like bleeding started within one to six hours after vaginal insertion of the prostaglandin. The uterine contractions started within 10 minutes of prostaglandin application and the peak activity was reached after 60 to 90 minutes, and lasted about four hours. The second tablet was then inserted." In two women, no vaginal bleeding occurred on the first day and a third tablet was inserted. This induced menstrual bleeding in one, but had no effect on the other. A week later, a pregnancy test showed that this latter woman was pregnant and the pregnancy was terminated by means of an intravenous infusion. All the women were interviewed one week after administration of the tablets. Eleven reported vaginal bleeding lasting three to four days, and described the bleeding as similar to that experienced in their previous menstrual period. All had a negative pregnancy test. Five women complained of pain in the lower abdominal region a few hours after prostaglandin administration. Three of them had experienced similar pain during their previous menstrual periods, and two described the pain as severe and similar to early labor pains. Four women also complained of nausea.

Promising though these developments are, however, all the investigators agree that far more research is needed to elucidate the nature of prostaglandins and to establish their safety. As Dr. Leon Speroff of Yale has noted, "The initial spectacular results with prostaglandins in abortions have been followed by the usual natural history of new drugs, i.e., reports of failures and complications." He urges that intensive research should precede full clinical use, and initial clinical use should be in controlled studies. "It must be reiterated," he explains, "that the safety of prostaglandins is not yet established. . . . The future of prostaglandin research may well have a critical relevance to human welfare. Therefore, it is deserving of financial support. . . . This work must be closely linked to fundamental studies in reproductive biology. Enthusiasm is justified, but enthusiasm has to be tempered by caution to avoid poor studies, inefficient effort and premature use."

Another cautionary note was sounded in a recent editorial in *Lancet*, which pointed out that "Animal experiments and metabolic studies have done little to clear up the confusion about how prostaglandins work in man." The editorial urged continued exchanges by scientists of clinical and laboratory data, and "exploration of the fundamental actions of these potentially useful therapeutic agents."

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The Pill

Clinics Teach Less Than Patients Learn

Family planning clinics in New York City teach their clients far less than they should know about oral contraceptives, two Columbia University investigators told the ninth annual meeting of the American Association of Planned Parenthood Physicians in Kansas City, Mo., last April. According to Dr. Linbania Jacobson, Director of Community Relations in Family Planning, and Elizabeth B. Connell, M.D., Director of Research and Development, at the International Institute for the Study of Human Reproduction, Columbia University, there is a wide gap between what 16 nationally known family planning experts think patients should know for safe and effective use of the pill and what family planning clinics teach. Furthermore, the knowledge patients do have is "not directly related to the instruction given in the respective clinics," they said. On the average, most patients know more than what is taught, though some know less.

The experts were chosen "on the basis of their involvement in clinical investigations and research activities among large pill-taking populations," Drs. Jacobson and Connell said. They were given a list of 94 items related to the pill and asked to rate them as *essential, useful* or *unnecessary* to pill use. They were also invited to add essential items they thought had been overlooked, and make comments as they saw fit.

While the experts were not in total agreement among themselves, at least three-fourths of them agreed that eight basic categories of information were "essential to the effective and safe use of the pill." These categories, with the percentages of experts considering them essential, are listed in Table 1.

To get a sample of what family planning clinics actually teach their clients, the investigators observed clinic sessions in 12 of the largest family planning programs in New York City, rating their educational content on its completeness, its statement in lay terms and the degree to which Spanish-speaking women were addressed in their own tongue. The clinics were sponsored by public and private agencies including municipal and voluntary hospitals, the health department, the Human Resources Administration and Planned Parenthood. As the table shows, the clinics approached the experts' standards only on when to take the first and last pill, with 87 percent handling this topic properly. Beyond that their performance fell off rapidly. Only 54 percent explained possible menstrual cycle changes associated with pill use; 46 percent discussed the theoretical- and use-effectiveness of the pill; 45 percent covered returning for a medical examination and prescription refill, and 43 percent gave instructions on what to do if the pill-taking cycle was broken. Only 25 percent explained the process of ovulation and what to do if specific symptoms occurred. Their scores were even worse when it came to discussing side effects associated with pill use. Only 14 percent—one out of seven—discussed breakthrough bleeding, spotting and thromboembolism. Not a single clinic explained such possible contraindications to pill use as breast-feeding or a previous history of blood clotting.

A total of 60 patients, five from each clinic, were questioned on their actual knowledge of the pill after they had presumably been taught about it.

Clinic teaching about the pill is often inadequate.

Table 1. Information Considered "Critical to Safe and Effective Use of the Pill" by at Least 75 Percent of Panel of Experts, Compared with Percentages of Clinics Providing This Instruction and Patients with Adequate Knowledge

Information	*% of Expert Opinion*	*% of Clinics with Proper Instruction*	*% of Patients with Adequate Knowledge*
When to take first and last pill	97	87	71
Possible menstrual cycle changes	87	54	53
When to return for checkup and prescription refill	87	45	70
What to do if one or more pills omitted	81	43	70
Contra-indications	81	0	13
Side effects	79	14	24
Basic information on ovulatory cycle and what to do if specific symptoms develop	78	25	43
Theoretical- and use-effectiveness of the pill	75	46	72

That the teaching was largely ineffective can be seen from the following: Only one of every four women supposedly taught about possible side effects they might experience, such as breakthrough bleeding, spotting and thromboembolism, understood them. Even fewer—only one of eight taught—were knowledgeable about the relation of pill use to breast-feeding or to a previous history of blood clotting. Only two out of five women allegedly educated about the process of ovulation and what to do if specific symptoms developed understood either. A better job of teaching was done on the question of when to take the first and last pills, with seven out of 10 women taught understanding the pill regimen. A similar proportion understood when to return for a checkup or a prescription refill. About two-thirds of the women knew what else to do to protect themselves from unwanted pregnancy if they discontinued the pill. More than seven out of 10 taught understood the use- and method-effectiveness of the pill. Less than half, however, understood the ovulatory process, and only about half knew when to expect menstruation to begin and

what to do if menses did not begin once they were on the pill.

Living as we do in an age of instant communication, the Columbia investigators stated, it was their opinion that a patient's ability to cope with "frightening, confusing and incorrect stories concerning fertility control techniques such as the pill" depends in great measure on the degree of rapport and trust already established with her physician or clinic personnel. With a good relationship based on warmth, respect, understanding and free and open discussion of the merits and disadvantages of all birth control methods, the patient can be reassured effectively and her peace of mind restored. "If, on the other hand," they said, "such rapport did not previously exist, fear, anxiety and panic may set in and all precautionary measures against unwanted pregnancy disregarded."

The already serious shortcomings in patient instruction shown to exist at many family planning clinics will soon become even more critical as these clinics expand their services to include abortion counseling, infertility services, sex counseling, sterilization and adoption services, Drs. Jacobson and Connell warned, adding, "the success or failure of . . . these newer programs may rest on the distinction and merits of their educational input." The Columbia investigators concluded: "A decisive effort must be made by each clinic director to formulate and implement a training program defining objectives and guidelines that will enable any health worker to successfully counsel any patient on her desired family planning goals. Concerning the teaching on the use of oral contraceptives this formulation of objectives is long overdue."

Source

L. Jacobson and E. B. Connell, "The Status of Patient Instruction and Oral Contraceptives: 1970," paper presented at ninth annual meeting of American Association of Planned Parenthood Physicians, Kansas City, Mo., April 5, 1971.

New Findings: Liver, Libido, Breasts, Vit. A

Recent investigations from Finland, Britain and the United States on the effects of the combined estrogen-progestin pill on liver function, vitamin levels, galactorrhea and on psychosexual states have shown:

- Prescription of the contraceptive pill appears to be safe for women who have recovered from liver disease; and previous pill taking does not appear to influence the course of such disease.
- Pills do increase vitamin A in women —a factor which, in experimental animals, has been associated with changes in reproductive capacity and increased congenital malformation. Toxic levels are not approached in humans who are on the pill, however.
- Pill patients do not suffer more than nonpill patients from excessive breast secretions. Estrogens in the pill may, in fact, decrease persistent postpartum secretion.
- Women prone to premenstrual weepiness or depression during pregnancy appear more likely than other women to stop using pills because of headache, depression or libido loss.

Liver Disease

A. Eisalo and coinvestigators associated with the University of Helsinki prescribed combined oral contraceptives to two groups of women who had recovered from hepatic disease in an effort to determine precisely when and whether it is safe to prescribe orals in this situation. Ten women, ranging in age from 17 to 43 years, had suffered bouts of virus hepatitis, the diagnosis being confirmed by the clinical course of the disease, laboratory findings and by liver biopsy in eight of the 10. A second group of five women, aged 17–29, had obstructive jaundice. In two the obstruction was caused by cholecystitis (inflammation of the gall bladder), in another two by gall stones and in one by fibrosis of certain muscle fibers (sphincter of Oddi). In four of these patients the diagnosis was verified at operation. Six of the 10 women in the virus hepatitis group had used oral contraceptives for several months before admission to the hospital, while one in the second group had taken the pill for three months before her illness.

Resumption of the oral contraceptive in the virus hepatitis group was begun 14 days after normal liver function was restored; four of the patients with obstructive jaundice were started on the oral contraceptive eight weeks after surgery; and for the patient who was not operated on, the pill was begun two weeks after normal liver function was restored. In each case, the patient was checked every two weeks for two to three months to determine the results. It was found that in the first group, although there was some elevation of serum levels above normal limits in the first month on the pill, all the patients were within normal limits within a short time. In the second group, the serum enzymes stayed within normal limits, except in one case, a 21-year-old woman whose obstructive jaundice was caused by acute cholecystitis. It took 11 weeks before her tests reached normal limits. The investigators conclude from their study: "The previous use of oral contraceptives did not seem to influence the clinical course of the hepatitis or the serum enzyme levels in the [contraceptive] trial period, and in women who had recovered from obstructive jaundice the serum enzyme levels remained within normal limits . . . or gradually became normal," in the course of administration of the pill.

Vitamin A and the Pill

Dr. Isabel Gal and colleagues from two London hospitals, noting that alterations in vitamin A levels in animals have been shown to be associated with changes in reproductive capacity and an increased incidence of congenital malformations, and may also be associated with congenital central nervous system disorders in humans, undertook an investigation to determine whether oral contraceptives have a significant influence on human vitamin A status. In their study, 20 healthy young volunteers aged 20 to 32 years, with regular menstrual cycles, acted as controls for 22 women of the same age-range who had been receiving a variety of combined oral contraceptives for at least three months. To assess the influence of hormone levels on vitamin A metabolism, both groups were studied on two occasions during one menstrual cycle: during days three to five, when hormone levels are low and, during days 18 to 21, when they are high. In the contraceptive group the first blood sample was taken in the tablet-free interval.

Tests showed that vitamin A levels were significantly higher in the oral contraceptive group on days three to five and days 18 to 21. "The raised level in the first sample is of interest," the investigators observed, "because this occurs during the tablet-free interval between courses of contraceptive pills, when most of the synthetic hormones have been excreted." In the control group significant increases in vitamin A levels were found during days 18 to 21 (following ovulation), when physiological levels of sex hormones are high. There was no significant change in vitamin A levels during the cycle in the oral contraceptive group. The investigators concluded that although a significant increase in vitamin A is found in those taking oral contraceptives, further work is necessary to determine whether this may effect the fetus in patients who become pregnant shortly after discontinuing oral contraception. They pointed out that none of the pill subjects had values approaching toxic levels.

Galactorrhea

Drs. A. B. Shevach and W. N. Spellacy of the University of Miami Medical School investigated the possible relationship between oral contraceptives and galactorrhea (breast secretion) since it had been sug-

gested by others that the pill might be a cause of the condition. A group of 132 parous women, all more than a year postpartum, and all of whom were using one of four methods of contraception, were studied. The controls (52) used mechanical contraceptives—diaphragms, condoms or IUDs. Test subjects used either the combination pill (42), an injectable progestin (29), or an oral progestin (9). All steroids had been taken for at least six months. A complete breast examination was done on each woman, and such data as age, parity and date of last pregnancy were recorded. Women on the combination pill had the lowest incidence of galactorrhea (19 percent) while women using mechanical contraceptives had the highest incidence (32.7 percent). The differences between the steroid and the mechanical group were not, however, considered statistically significant. No other breast changes were found, and when examinations were repeated during the next several months, subjects were found to produce secretions at one time and not at another. The investigators concluded: "The results demonstrate that breast secretion can be found very frequently more than one year after a pregnancy when no drugs are being used. . . . There is no significant difference in incidence if progestins or combined progestins and estrogens are being taken for fertility control. These data . . . demonstrate a lower incidence of breast secretion in the oral contraceptive group. This observation suggests that the estrogen component may play some role in decreasing the spontaneously high incidence of persistent postpartum breast secretion."

Psychosexual States

In the past few years there have been conflicting reports in the medical literature concerning the psychosexual effects of oral contraceptives, with some investigators reporting increased incidence of depression, others reporting either increase or decrease in libido. To clarify the relationship, a British team of investigators led by Dr. Brenda N. Herzberg undertook a prospective study in 1968 to investigate the association between oral contraceptives and changes in mood and libido. They surveyed 272 women between the ages of 20 and 45 who had been married for at least six months, and who had neither given birth nor used oral contraceptives during the previous year. All had come to birth control clinics and were going to start using oral contraceptives or were being fitted with the IUD. In addition to information from a physical examination, baseline data were obtained by a standardized questionnaire completed by the interviewing doctor, and depression, libido and personality were assessed by self-rating questionnaires. Subsequent visits occurred at intervals of two, five, eight and 11 months from the initial visit, when further data were obtained and the self-rating questionnaires were again completed. Throughout the survey three questionnaires were used to estimate depression, libido and personality.

The investigators found that 37 percent of the women placed on oral contraception remained on the same type of pill for one year. Though they experienced a progressive improvement in mood, they had an increase in incidence of moderate or severe headache. One-quarter of the total group on oral contraceptives stopped using the pill because of side effects, the most common of which were headaches, depression and loss of libido; and 13 percent of the IUD group stopped using the method for other reasons, generally because of breakthrough bleeding. The group of women who stopped or changed their oral contraceptives during the survey period were compared with the group which remained on the same prescription throughout. It was found that the former had higher mean depression and neuroticism scores at the first clinic visit and contained more women with a history of premenstrual weepiness, depression during pregnancy, outpatient psychiatric treatment and treatment with antidepressants. The results suggest, the investigators note, that some women in this group can be identified from their histories of depression and severe premenstrual weepiness and, where possible, "they should be advised to use alternative methods of contraception."

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1971 Sanger Award to Dr. Louis M. Hellman

Dr. Louis M. Hellman, Deputy Assistant Secretary for Population Affairs of the Department of Health, Education and Welfare, received Planned Parenthood-World Population's Margaret Sanger Award for distinguished service in the field of family planning at the voluntary agency's annual meeting last October. The citation to Dr. Hellman noted his many-faceted contributions to family planning, to medical education and to women's health:

- In 1958, the physician played a key role in lifting the taboo against the provision of family planning services in New York City's municipal hospitals, paving the way for greater participation by both public and voluntary agencies throughout the nation in this field.
- As Chairman for four years of the Food and Drug Administration's Advisory Committee on Obstetrics and Gynecology, Dr. Hellman was instrumental in mobilizing the medical and scientific community's efforts to monitor the safety and efficacy of the oral contraceptive and to define the precise safeguards necessary to its proper utilization.
- Dr. Hellman trained a generation of young doctors in the art and science of healing. He also pioneered the training of nurse-midwives in obstetrics and gynecology and in family planning.

Family Planning Job Opportunities

Family planning agencies are invited to send job opportunity statements for professional positions to:

National Center for Family Planning Services
HSMHA, DHEW
5600 Fishers Lane, Room 12A-33
Rockville, Maryland 20852

The National Center for Family Planning Services, HSMHA, does not necessarily support the agencies seeking to fill positions.
All openings listed below are with Equal Opportunity employers.

Position: Field Director
Agency: Planned Parenthood-World Population
Location: New York, New York
Salary Range: $22,000-$25,000
Job Description: Set overall objectives and program and supervise Field staff of 42 in national and seven regional offices; develop and implement new programs. Act as liaison between local affiliates, regional and national staff; liaison with and staff support for volunteer committees.
Qualifications: Program planning, development, management and administration. Experience with a voluntary health agency, preferably family planning. Experience in the maternal and child health field acceptable.
Contact: Pamela Veerhusen, Planned Parenthood-World Population Affiliate Services, 810 Seventh Avenue, New York, New York 10019 (for this and position below)

Position: Assistant Director for Program Development
Agency: Planned Parenthood-World Population
Location: New York, New York
Salary Range: $16,500-$17,500
Job Description: Program planning and development at headquarters, regional and local affiliate levels, working with regional staff and volunteers; designing and overseeing demonstration projects.

Family Planning Digest
National Center for Family Planning Services
Health Services and Mental Health Administration
Department of Health, Education and Welfare
5600 Fishers Lane, Room 12A-33
Rockville, Maryland 20852

Qualifications: Planning and program development experience in a voluntary organization required; experience in family planning desirable.

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Position: Southeast Region Assistant Director
Agency: Planned Parenthood-World Population
Location: Atlanta, Georgia
Salary Range: $15,000-$17,000
Job Description: Leadership in expanding Planned Parenthood activities within the region by working with affiliates, assisting other organizations and groups, developing new affiliates, encouraging public health and welfare agencies to provide family planning services; act as a resource consultant in fund raising, community organization, public and professional education, to affiliates and other groups within the region.
Qualifications: Minimum of two and one-half years experience (preferably both rural and urban) with Planned Parenthood affiliates or other voluntary health agencies. Some experience with federal programs also valuable. Some planning, training and/or fund raising expertise. M.A. or M.S. desirable but not required.
Contact: Dorothy DuBois, Planned Parenthood-World Population Southeast Regional Office, 3030 Peachtree Road, N. W., Atlanta, Georgia, 30305

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Position: Program Development Specialist
Agency: Family Planning International Assistance, Planned Parenthood-World Population
Location: New York, New York (with substantial international travel)
Salary Range: $18,000-$25,000 (negotiable)
Job Description: Advise and consult family planning programs overseas on the training and use of midwives and other paramedical personnel.
Qualifications: Certified nurse-midwife. Family planning program experience.

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Position: Training and Manpower Specialist
Agency: Family Planning International Assistance, Planned Parenthood-World Population
Location: New York, New York (with substantial international travel)
Salary Range: $18,000-$25,000 (negotiable)
Job Description: To provide advice and consultation on the training of all categories of family planning program personnel to operating family planning programs overseas.
Qualifications: Experience in the design of training curricula and presentation of training sessions. Experience in the training of family planning program personnel.

Position: Program Development specialist
Agency: Family Planning International Assistance, Planned Parenthood-World Population
Location: New York, New York (with substantial international travel)
Salary Range: $25,000-$35,000 (negotiable)
Job Description: Advise and consult operating family planning programs overseas on family planning medical standards and procedures.
Qualifications: M.D. degree. Family planning program experience.
Contact: For all the openings in the Family Planning International Assistance program, John Palmer Smith, Planned Parenthood-World Population, 810 Seventh Avenue, Room 660, New York, New York 10019

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Position: Executive Director
Agency: Planned Parenthood Association of Orange County
Location: Anaheim, California
Salary: Commensurate with ability and experience
Job Description: Work with the Board to build policy and programs and set directions. Assist in fund-raising activities; recruit, train and supervise agency staff and volunteers.
Qualifications: Management experience, preferably in family planning or public health. Excellent administrative skills and ability to work well with others essential.
Contact: Mrs. Mary Freck, 515 Taormina Drive, Anaheim, California 92806

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Position: Executive Director
Agency: Planned Parenthood League of Rochester and Monroe County
Location: Rochester, New York
Salary: Approximately $15,000
Job Description: Work with Board to build policy and programs and set directions. Assist in fund-raising activities; recruit, train and supervise staff and volunteers. Staff of 20 will expand significantly. Budget approximately $250,000.
Qualifications: At least three years of management experience, preferably in public health. Excellent administrative skills and ability to relate well with people essential. M.B.A. preferred.
Contact: Douglas M. Reid, Chairman, Personnel Committee, Xerox Square—004 Xerox Corporation, Rochester, New York 14603

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Position: Executive Director
Agency: Planned Parenthood Center of Pittsburgh
Location: Pittsburgh, Pennsylvania
Salary Range: Commensurate with experience
Job Description: Work with Board to build policy and programs and set directions. Assist in fund-raising; recruit, train and supervise agency staff and volunteers. This is a large affiliate with varied activities, including active DHEW projects and both service and educational programs.
Qualifications: Family planning experience essential. Managerial experience preferable. Excellent administrative skills and ability to work well with people.
Contact: Mrs. Mary Lore, Planned Parenthood Center of Pittsburgh, 526 Penn Avenue, Pittsburgh, Pennsylvania 15222

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Position: Staff Assistant, Public Relations, United Planned Parenthood Campaign
Agency: Planned Parenthood of New York City
Location: New York, New York
Salary: $12,000
Job Description: Assist in writing, producing and placing publicity materials in connection with the fund-raising campaign of the agency and in its information and education program.
Qualifications: Five years experience, preferably doing publicity, public relations, production and special events on behalf of fund-raising effort of major nonprofit social welfare or health organization; good writing abilities.
Contact: Marion Levy, Planned Parenthood of New York City, 300 Park Avenue South, New York, New York 10010

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Position: Nurse or Social Worker
Agency: Family Planning Program
Location: Helena, Montana
Salary: Commensurate with ability or experience
Job Description: Supervision of outreach workers; planning inservice training; cooperation with other agencies for referrals; counseling with individuals on personal and marital problems; assisting with clinic sessions.
Contact: Family Planning Program, Box 721, Helena, Montana 59601

Credits

pp. 1, 7, 9, 13: Ken Heyman; p. 2: from D. M. Rorvik with L. B. Shettles, *Your Baby's Sex: Now You Can Choose*, Dodd Mead, New York, 1970; p. 5: Edward Breitwieser; p. 8: Jane Ross; p. 10: Family Planning Project, Tulsa City-County Health Department.

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