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REPORT OF DR. SAVITRI RAMCHARAN TO THE USAID MISSION, NEW DELHI (OCTOBER 19 - DECEMBER 31, 1981)

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1. Arrival in New Delhi, October 19, 1981

a. Gary Merritt, Ph. D., Deputy Chief, Health, Population and Nutrition, gave me a general review of the functions of USAID and my role as a consultant and introduced me to some of the members of the staff.

The next day, October 20, I met Mrs. Priscilla M. Boughton, Director of USAID, at lunch. She advised me to keep open to suggestions for research studies on OCs in India while on my trip, as AID has funds that can be made available for such studies.

b. Gary then took me to the Indian Council of Medical Research (ICMR) for a meeting with Dr. Badri N. Saxena, Senior Deputy Director-General. We discussed with him people and places I should visit. He suggested: the Ob-Gyn meeting in Calcutta at the end of December; Dr. Srinivasan's demographic institute in Chembur, Bombay; also in Bombay, the Institute for Research in Reproduction; Dr. Prem Talwar of the Ministry of Health & Family Welfare; Gandhigram in Madurai; Prof. Sunder Rao, Head of Biostatistics, Vellore Medical College; Dr. (Mrs.) Vira Hingorani, All India Institute of Medical Sciences; Dr. A.N. Gupta, Prof. of Ob-Gyn, Postgraduate Institute of Medical Education and Research, Chandigarh; and Dr. P.C. Sen Gupta, Assoc. Prof. of Ob-Gyn, Vivekanand Institute of Medical Sciences, Ramakrishna Mission Seva Pratishthan, Calcutta.

c. We then met with Dr. S. N. Mukherjee, Deputy Commissioner, Ministry of Health and Family Welfare (MOHFW). He recounted briefly the history of family planning policy in the Government of India. The pill is the "baby" of their contraceptive program, he said. The official position is that the serious side effects of oral contraceptives are not of concern here. Venous thromboembolism is not common in India, and the women to whom they propose to make OCs easily available are young, active, nonobese, nonsmoking villagers. In March 1979, the MOHFW had issued a directive to the state governments authorizing the distribution of oral contraceptive pills by paramedical personnel, with the proviso that the acceptors be examined by a doctor within three months of acceptance of OCs. A checklist of criteria for selection of OC acceptors was to be filled out by the paramedical personnel. These criteria excluded women over 35 years of age, pregnant or lactating women, grossly malnourished or obese women, smokers, those with a history of toxemia of pregnancy and certain others with a history of selected symptoms. Nulliparous women were to be examined by a physician before they could be given OCs.

Following the inception of this program acceptor rates gradually increased but not so quickly as was desired. Also, the dropout rate at 3 to 6 months was quite high. One reason was that the medical staff were concerned about the ill effects of OCs. But another important reason was that OCs were not readily available. The Ministry of Health was hopeful that making OCs easily available through nonmedical distribution would lead to increased usage.

d. October 21, 1981, New Delhi: I met Dr. Saramma Thomas, a young physician who graduated from the Christian Medical College at Ludhiana, and Dr. Purshottam Diesh, formerly malariologist with WHO, and now consultant with USAID. He gave me information about the Ayurvedic Trust and Medical College in Coimbatore, and about its collaborative study with ICMR and WHO to evaluate an ayurvedic treatment regimen for rheumatoid arthritis.

e. In the afternoon I met with Dr. Sarah Israel in the Ministry of Health and Family Welfare. We had been coworkers in the Government of India Family Planning and Contraceptive Testing Unit at the Indian Cancer Research Center, Parel, Bombay, in 1955-56. Dr. Israel told me about her work preparing and editing training manuals for community health workers.

f. October 22, 1981: Gary Merritt took me to the Ministry of Health and Family Welfare to meet with Mr. Vikramajit, Marketing Executive, and Mr. Narashimhan, Research Executive. Mr. Narasimhan showed me some of the statistics of the Government of India's oral contraceptive distribution program. The number of acceptors has been declining (from 100,000 to 85,000). The OCs are distributed at no cost to acceptors in the government centers by personnel who are state government employees. These personnel use very little or no persuasion to induce the clientele of the clinics to use OCs. According to Mr. Narasimhan, the private sector now has about 300,000 users in India (6 companies and 12 brands). The government is

eager to see increased distribution of OCs by the private sector. The feeling is that government patronage is necessary for their success. Their capacity for OC manufacture is large but underutilized. They are unable to generate sufficient prescriptions from doctors in spite of their detailing efforts. One of the reasons for their lack of success is product cost. There is an 85 percent duty tax on the raw materials used in the manufacture of OCs. The price to the consumer ranges from Rs. 3.50 to Rs. 9.00 per cycle. This is a hindrance to use by many persons. He said that another reason for the low acceptability is that the doctors seem to have preconceived notions about the risks of OC use and are influenced by the publicity given to OC risks. Only about 20,000 doctors out of a total of between 80,000 to 100,000 now prescribe OCs.

Mr. Vikramajit showed great interest in my comments on the more recent information about OC risks that has come out from various studies, including the Walnut Creek Study. I told him that the weight of the evidence now indicates that the risks of OCs have been exaggerated not only by the communications media but by researchers and epidemiologists as well. To date, there has been no definite evidence linking OC use with any form of cancer. Moreover, substantial evidence has been accumulating of reduced risks of endometrial cancer, ovarian cancer, fibrocystic disease of the breast, rheumatoid arthritis, and iron deficiency anemia in OC users.

I informed him that the Food and Drug Administration (FDA) of the United States Government had held a meeting of their Fertility and Maternal Health Drugs Advisory Committee on May 7, 1981 to review and discuss the Walnut

Creek Contraceptive Drug Study.* The general function of this committee is to review and evaluate available data concerning the safety and effectiveness of marketed and investigational prescription drug products for use in obstetrics, gynecology, and contraception. The committee members come from academic institutions, private medical practice, and the lay public. I was invited by the FDA to present a review of the findings of the Walnut Creek Study. Several other speakers also discussed the Walnut Creek Study. The central item on the agenda was whether, on the basis of the results of the Walnut Creek Study, the pill package informational insert should be modified. The consensus conclusions of the committee were that the existing package insert was a scare document and that the information it contained was unintelligible to the average and contraceptive user. It was therefore not fulfilling its intended objective, and it was out of date. They asked that the FDA not require them to meet and make decisions about a single OC study at a time. They recommended instead that a committee be set up to review all of the recent studies about OC side effects in order to update the information and to revise the package insert.

Mr. Vikramajit was eager to have my comments and opinions made known to allopathic doctors and health personnel and suggested that an appropriate way to accomplish this was by distributing to them an article in which I would present an updated account of the information about OC side effects. I suggested that an attempt should be made (perhaps by USAID) to obtain

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* This was a combined open public hearing and open committee discussion held by the executive secretary A. T. Gregoire, Bureau of Drugs (HFD-130), Food and Drug Administration, 5600 Fishers Lane, Rockville, MD 20857; telephone number 301-443-3542.

reprints of two papers to be published as part of the proceedings of the Symposium on Steroidal Contraceptives, which was held at the University of Leuvers, Belgium, on September 24-25, 1981. One paper dealt with the benefits of OCs and was presented by Dr. Howard Ory, Center for Disease Control, Atlanta, GA. U.S.A., and the other, which discussed several of the myths regarding OC side effects, was presented by Dr. Daniel Mishell and coworkers of the Department of Obstetrics and Gynecology, University of Southern California, U.S.A.

g. On October 27-28, 1981 I was an observer at the ICMR Workshop on Improving Availability of Contraceptive methods, which was held at the All India Institute of Medical Sciences, New Delhi. *

Several of the participants came from countries where programs of community-based distribution of OCs had operated successfully. The aim of the workshop was to bring together the experience gained from these projects to help guide the planners of the Indian program. One Indian project that appeared outstanding in its approach and achievements was that of Dr. I.C. Tiwari and coworkers of Varanasi. This was supported by the Family Planning Association of India. Dr. Tiwari and Mr. N.S.N. Rao, his associate, invited me to see their project.

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* Copies of papers presented at the Symposium are attached.

During the closing session, Prof. Ramalingaswamy asked me to say something, since I had been a silent observer so far. I said: (1) I was surprised to find that the Ministry of Health was not concerned about the serious side effects of OCs and (2) on a more delicate topic, I would expect, as has happened in the U.S.A., some persons might misconstrue the attempts to make OCs more easily available as promoting free sex. I hoped that the planners would keep this possibility in mind and that the Indian program would be able to support the traditional cultural values and at the same time succeed in providing women with the freedom to decide the size and spacing of their families.

2. Family Planning Association of India, Bombay, November 2, 1981

In the absence of Mrs. Avabhai Wadia, President, Dr. K. Seshagiri Rao, Ph.D. (sociology), Director of Projects, discussed with me the function and program of FPAI. FPAI is not primarily a provider of services but acts as a catalyst to get programs started in communities within the context of health, social, educational, and other community activities. It provides seed money for materials, etc., in some cases, but its main aim is to so inspire and motivate the community leaders that they will themselves take the initiative in implementing programs. Only in this way, FPAI reasons, will programs be enduring. It is Dr. Rao's opinion that the lack of community involvement is one of the main reasons for the short-lived nature of most of the projects started by government efforts. He cited

two instances with which he is personally familiar in which the village communities made decisions and took action on their own initiative. In these instances the projects were very successful.

Dr. Rao spoke enthusiastically about FPAI's Varanasi project and was pleased that I will be going there. Three aspects of the project that he thought will be of particular interest to me are the demonstration of acceptability of oral contraceptives by rural women, the linkage of family planning with the health program, and the research and evaluation studies being conducted by postgraduate students from the university. He would be particularly interested in a comparison between the receptions given to oral contraceptives dispensed through government health workers and those dispensed through village health workers. He suggested that I talk with members of the Varanasi project about additional evaluation projects that could be started. He would welcome studies to determine criteria for evaluating the potential stability and self-sustaining quality of a project. These could provide FPAI with guidelines for determining when it might withdraw support from specific projects.

Dr. Rao told me about some of the other FPAI projects: 1. Bangalore : Mrs. Leelavathi Chandrasekhar, President, FPAI Bangalore Branch, "Sai Krupa" 105 Rly. Parallel Road, Kumarapark (w) Bangalore 56020 (tele: 35647). Their rural project is Rural Family Planning and MCH Project, Malur - 563130, Kolar District (Karnataka) Tel: 67). Malur is about 30 km

from Bangalore. It is one of the best FPAI community projects, he said. The program is based mostly on temporary methods plus motivation for the community. 2. Calcutta: FPAI Calcutta Project - "Neelander", (4B & 4C) 28/B Shakespeare Sarani, Calcutta - 700 017 (tel:44-4389). Dr. A.N. Dutta, Director. He also mentioned that the Christian Medical Association of India has a very large oral contraceptive program that is hospital based. It is headquartered in Bangalore and Vellore is part of their program. The person with whom to make contact is: Dr. D. Isaac, The Christian Medical Association of India, 197/C - VIII B - Main Jayanagar III Block, Bangalore - 560 011 (tel: 605 734 or 605 735).

I asked Dr. Rao about the sources of FPAI funds and whether it receives contributions from within India. Most of FPAI's support comes from IPPF. It does not receive monetary contributions from Indians directly, but when FPAI works in a community, its aim is to have the project ultimately supported entirely by the community either in the form of personnel time or by income-generating activity. Dr. Rao is convinced that a community program can succeed only when self-reliant action is undertaken by the community itself.

Dr. Rao is uncertain whether the consistent day in and day out taking of oral contraceptives by village women could be depended upon. I commented that most Indian women are accustomed to daily rituals in living that they

unfailingly carry out. He agreed and said he would not expect such constancy from Indian men but knows that the women will carry out their daily family responsibilities even when they are ill. Therefore, if the taking of oral contraceptives could be put into the context of the daily ritual, consistency in their use may be assured. I asked him whether the ayurvedic approach to health maintenance might not be a more suitable context for educating village women in the use of oral contraceptives. He said he thought it might be.

I then had a brief meeting with Dr. M.S. Boparai, physician, Director of Branch Development, FPAI. When I asked what his attitude would be toward the nonclinical distribution of OCs, he said that FPAI follows the regulations and directives laid down by the Government of India. He said they would have to await the directive from the Ministry of Health and Family Welfare to see how the government proposed to implement the change in the procedure for distributing oral contraceptives. He himself welcomes methods that will encourage wider use of OCs because, as one with public health experience, he views the problem of fertility control in a broader perspective than does the practicing physician. According to Dr. Boparai, the FPAI has exceeded the government targets for acceptor rates in the current target year. FPAI covers1 percent of the potential population, which totals one million persons. It now have 10,000 users of OCs in a national total of 80,000.

I was introduced to Mrs. Pramila Thakore, Assistant Director, Field Work, FPAI. She arranged for me to meet a few of their clinic physicians (about 5 young women) who were reporting to the head office on Monday. They were all keenly interested in my brief presentation, updating their information on the side effects of oral contraceptives. Some of their concerns were postpill amenorrhea and the possible risks from long-term use (three years and more). I understood from their comments and from those of several other physicians with whom I have talked that any disturbance of the menstrual cycle is viewed with alarmed concern by Indian women. If this is indeed so, then use of OCs could be viewed as a blessing or a curse, if women are not prepared in advance for the possible effects; for those who use them consistently and achieve controlled, regular menses, the pill will be a blessing; for those who experience break-through bleeding from whatever cause or who have no menses or irregular menses for several months after stopping the pill, OCs will be a curse. The physicians' thoughts about possible long-term risks were vague; they knew of no definite evidence indicating risks; but they thought that such risks existed.

I visited the FPAI Hospital, where I met and talked with the lady doctor in charge. Another physician, male, Dr. Patel, also joined in the discussion. The hospital has 9 beds and 2 operating tables. Women are admitted on Mondays, Wednesdays, and Fridays for tubectomy. Most of these operations are done by laparoscopy, but some women prefer the transvaginal method

that was previously used. The physician thought this might be because they are used to the idea of vaginal delivery and consider abdominal incision as indicating a more serious condition. The women are discharged on the second or third day. On Tuesdays and Thursdays, men come in for vasectomy as outpatients. Signatures indicating informed consent are obtained. Currently a cash incentive of Rs. 70 + Rs.5 for transportation is paid to the acceptor of tubectomy or vasectomy and Rs.5 to the motivator.* IUDs, principally copper-Ts, are also fitted at this hospital.

Two problems encountered by the doctors in their delivery of contraceptive services are changes in drug type or dose and the unavailability of certain kinds of contraceptives subsequent to their acceptance by women. For example, the doctors described the successful use of diaphragms by women who became dedicated users but who were very disappointed when diaphragms became no longer available. I expressed surprise that diaphragms had proven acceptable and effective in that environment, but they assured me that some women were very adept at understanding and using the diaphragm successfully. Similar stories can be told about reactions to change in oral contraceptive formulation.

The hospital is a referral center for all of the FPAI clinics in the area. It also serves the surrounding population of about 50,000.

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* A copy of the hospital form is attached.

3. The Institute for Research in Reproduction, Bombay, November 3, 1981

I met with Dr. A. R. Sheth, Acting Director, for a brief orientation talk in his office, where we were joined by Dr. (Mrs.) Usha Joshi, Head of the Clinical Chemistry Division. Dr. Joshi was quite familiar with the publications of the Walnut Creek Contraceptive Drug Study through Volumes I and II of the monograph series. She had not seen Volume III.

I asked her about her studies on vitamin levels and OC use. She said that the data were hard to interpret because the blood levels in the comparison groups were overlapping, and there was no correlation between blood levels and clinical manifestations of vitamin deficiencies. They concluded that measurement of vitamin levels and treatment of abnormal levels in OC users were not warranted.

I presented some of the results of the Walnut Creek Study to a group of about 35 persons, mostly young women, on the Institute staff. I gathered that most of those present were nonmedical research workers. I had several inquiries about research questions. One was from a young women who was carrying out studies on the relation of vasectomy to cardiovascular disease. Her problem was that the men who smoked also drank alcohol, and she was at a loss to know how to conduct a study that would separate out the effects of these two factors. I suggested to her the possibility of doing a multicenter study including parts of India where the behavioral patterns might be different, and where it might be possible to obtain study groups of men who smoke but do not drink or who drink but do not smoke. I also pointed out how important

it was for researchers to make known to their administrators and decision makers the kinds of difficulties that are inherent in epidemiological studies that are carried out in free-living human populations; since experimentally controlled groups cannot be set up, one must always keep in mind the possibility that uncontrolled factors might be affecting the results. Although conclusions from such studies cannot be definitive, they too often provide a basis for official directives that become binding.

Another question came from an immunologist, Bilquis U. Tezabwala, Ph. D. She has been studying cell-mediated humoral response to OCs. She said that the possibility that OCs might suppress the immune response would have important implications for the widespread use of OCs in India, where infectious diseases are the major forms of illness. Yet there was little research going on in the area. The resources available to her in terms of equipment and grant support are scant. I told her that I agreed with her that it was an important area of research not only for India but for all developing countries, and it was one of the areas that I had recommended in Volume III of the Walnut Creek Study for further research studies.* She said that a report of the results of their work on cell-mediated humoral response to OCs had been submitted for publication. I also discussed the results of this study with Dr. Tezebwala's collaborator, Dr. Uma C. Hegde, senior scientist and immunologist. An abstract of their paper appears in the Journal of Steroid Biochemistry, vol. 9. no. 9 (September 1978).

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* Ramacharan et al: The Walnut Creek Contraceptive Drug Study vol. III. p. 237

Fifth International Congress on Hormonal Steroids, p. 259. Their conclusion was that there was no significant change in cell-mediated immunity following the use of hormonal contraceptives for a period of 12-18 months as assessed by PHA stimulation.

4. Meeting with Dr. B. N. Purandere at his Maternity Hospital and Family Welfare Clinic, Chowpathy, Bombay, November 5, 1981

Dr. B. N. Purandere is definitely opposed to nonclinical distribution of OCs because he feels the medical contraindications cannot be adequately assessed by nonmedical persons. He is not concerned about venous thromboembolism, of which he has seen only one case in his twenty years of practice. More cases occur in rural areas, where "white leg" (postpartum thrombophlebitis) is more common than in his urban practice. He speculated that the lower incidence in Indians compared to people of European origin might be due to differences in genetic blood factors, or diet; he doubted that it was because of climate. The causes of his concern with regard to OCs are: 1. Postpill permanent amenorrhea and sterility. These usually occurred in women who were given OCs for treatment of menstrual problems. He always warns doctors in his training programs and lectures that OCs should never be given for regulating menses. In his experience women who have demonstrated their reproductive maturity by a first birth show no disturbance of the menstrual cycle when they discontinue OC use. He described the results of a study that compared the occurrence of ovulation after tubal

ligation, IUD use, and OC use in which delayed ovulation was found after tubal ligation and IUD use but no delay after discontinuance of OCs. He therefore would consider OCs contraindicated in women who have not given birth to their first child.* The decision to give OCs to nulliparous women will have to be made only after a assessment of menstrual history plus a gynecologic examination that would take note of any evidence of underdevelopment of the uterus and ovaries. Immaturity would be a contraindication to OC use. 2. Occurrence of vaginal and cervical infections in OC users. Particularly troublesome and resistant to therapy are moniliasis and trichomonos infections. He has found these infections to occur more frequently in OC users. 3. Nonmedical personnel cannot be depended upon to determine a past history of toxemia, jaundice, or diabetes. Dr. Purandere would therefore insist that a physician carry out an evaluation of the medical history and perform a pelvic examination of every prospective OC user. Dr. V.N. Purandere (Ob-Gyn, son of Dr. B.N. Purandere) gave the opinion that the OC user should be checked by a physician after her first month of use. If she has no symptoms at that time she may then be followed by nonmedical personnel.

I asked whether there are enough physicians to provide this kind of service to all the rural communities. They thought that the distribution of one physician per 80,000 population (the usual scope of a community health center) is adequate, provided that the physician carries out his duties conscientiously. He also has adequate support staff. Since he is responsible

* Sense not clear : ed.

for prenatal, obstetrical, and postpartum care, he actually is in an ideal situation to provide contraceptive services. Female sterilization is most efficiently carried out in the postpartum period, and yet support for such a program was discontinued by the government.

I asked whether the "government" always meant the central government and were there not responsibilities and programs at the state level. Dr. Purandere explained that the states were free to implement whatever programs they wish to in order to meet the targets for numbers of acceptors as set by the central government.

Contraceptive services, he said, should be given on an individual basis; general criteria cannot be applied to individual woman; a variety of methods should be made available; and the services should be within the framework of maternal and child health services.

5. Vellore Medical College, Vellore, November 7, 1981

Mr. P. Mathews of Wyeth in Madras accompanied me on my visit to the College. With his help I was received by the vice-principal, Dr. (Mrs.) Molly Thomas Bhanu, and the principal, Dr. Benjamin Pulimood. Dr. Pulimood arranged for me to meet with Dr. Sunder Rao, statistician, and Dr. D. Benjamin, internist, and also for me to be taken to the Community Health and Development Center of their rural project. There, Dr. J. Prakash

gave me a review of their rural program and their new medical curriculum, which provides experience and training in rural health for their class of 60 medical students. Their first class trained under the new curriculum will graduate this year. The program will then be evaluated to determine if the new curriculum is effective in preparing the young doctors for rural practice.

At the community health center I met the director, Dr. Sulochana, an obstetrician-gynecologist. She said that oral contraceptives are not accepted by the village women because they have vague fears about the safety of OCs. Also, the center has changed from a 50mg estrogen product to the government product, which contains 30 mg of EE. Their OC users began to have breakthrough bleeding on the new OC formulation, became confused about the pill regimen, and many of them have stopped taking OCs. Now there is only a handful of users and they do not have an active OC program going. Dr. Prakash thinks that another reason for the low usage of OCs is that doctors are not eager to push OC use among lactating women. Because breast-feeding during the first year of life is vitally necessary, use of estrogen-containing contraceptives is contraindicated during lactation. But according to him even women who are not breast-feeding are not using OCs because they are afraid of the side effects.

Dr. Sulochana said that she had developed venous thromboembolism while on OCs. The medical aspects of her case sounded unusual and complex with some

evidence of vascular complications developing even after she had discontinued OC use. I asked about the incidence of venous thromboembolism in the community. The doctors said that to their knowledge venous thromboembolism is not seen in urban populations, but might be more common among village women. However, reliable data are not available. Both Dr. Prakash and Dr. Sulochana are of the opinion that OCs should be made more easily available, but they do not see how it will be possible to maintain followup management of the side effects. In their community the copper-T IUD is widely accepted.

I presented a brief review of the findings of the Walnut Creek Study to a group of about 20 young physicians, nurses-in-training and social workers, at the community health center.

A regional meeting of surgeons was being held that day and Dr. Benjamin arranged for me to present a 10-minute talk on the results of the Walnut Creek Study.

6. Ayurvedic Trust of Coimbatore, November 9, 1981

I was received by Mr. P. V. Chandrashekhar Varier, the managing trustee, who arranged for me to visit: (1) their 50-bed hospital where a collaborative project with ICMR and WHO to evaluate the ayurvedic treatment regimen for rheumatoid arthritis is in progress; (2) their residential Ayurvedic College modelled on the age old gurukulu system, where students are given free education (7-1/2 years' course of training) and the medium of instruction is

Sanskrit; and (3) their factory where ayurvedic preparations are manufactured from raw herbs according to the ancient formulae. He also made brief mention of an ayurvedic regimen for control of fertility without side effects. When I asked about specific details, his answers were vague. I asked the editor of their new journal, Science of Life, whether it would be useful to have vaidyas distribute OCs to village women. He thought it would be unfair to vaidyas to ask them to be responsible for distribution and monitoring of OCs because, having had no training in the allopathic system, they would not be prepared to handle OC side effects. They would then be blamed for any adverse effects of OCs and their good name as vaidyas would become tarnished.

7. Madras, November 10, 1981

I met with the director of the Ayurvedic Trust, Mr. P.K. Krishnakumar, in Madras on his return journey to Coimbatore. He specifically wanted to know from me the protocol for testing new oral contraceptives in humans. They have formulae for oral preparations in ayurveda that he would like to test out in a pilot project. Unlike the situation with respect to new allopathic drugs, these ayurvedic preparations are already in general use for humans in India, since they have been handed down within the traditional medical system. Therefore they do not require preliminary animal studies as allopathic drugs would. I told him I would inquire from the Centre for Population Research Contraceptive Development Branch and from the Population Council about the criteria they use for evaluating new oral

contraceptive drugs.

8. Railway Hospital, Madras, November 11, 1981

Dr. L. Sulochana, pediatrician and superintendent of the Railway Hospital, arranged for me to give a talk to about 20 to 25 physicians at the hospital. Some opinions and comments from the group were: doctors may not be overanxious about the serious adverse effects of OCs but their patients are concerned about minor side effects and as a result discontinue use of OCs; uneducated classes cannot be depended upon to take OCs regularly: the Copper-T IUD is widely used in their community; next to the Copper-T, sterilization, male or female, is the most widely accepted method of contraception. Dr. K. Bhasker Rao, formerly with WHO, and an Ob-Gyn specialist, commented on the difference in behavior of Hindus in India and the people of Indonesia (he mentioned Bali in particular), where with a similar culture OC acceptance rate was much higher than it is in India.

9. Ramakrishna Mission Hospital, Calcutta, November 12, 1981

I was welcomed at the hospital by Swami Asakpananda, the director. I met Dr. P. C. Sengupta, Associate Professor of Ob-Gyn, who had arranged for me to address a small group of 25 to 30 physicians.

I learned that OCs were used by about 5 to 10 percent of their contraceptors, but I got the impression that they were quoting national statistics in answer to my queries. They did not seem willing or able to give me information

about use rates in their own clinic. I also found the same ambivalence in physician attitudes that I had noticed elsewhere: they never see cases of venous thromboembolism, but they very seldom prescribe OCs because they are well aware of the reported risks of VTE in OC users. Dr. Sengupta said that they were conducting a study on long acting injectible steroids for ICMR.

10. Drs. T. Banerjee, N.N. Roy Choudhury, and K.M. Gun, Calcutta, November 11, 1981

During the afternoon and evening of the same day I interviewed three physicians in their offices: Dr. T. Banerjee, obstetrician-gynecologist, was formerly principal of Calcutta National Medical College, and is now in private practice. It is his firm opinion that OCs should not be distributed by nonmedical persons. He thinks that only physicians can evaluate the medical contraindications in a patient. I asked whether there would be enough physicians available to do this. He replied that there is no shortage of physicians in West Bengal. In fact, they are exporting physicians. Based on his own experience, it is his practice to give OCs to a woman for only 9 months at a time. This is done to avoid problems of oligomenorrhea, amenorrhea, reduction in breast size, and loss of libido. He thinks that the husband should carry part of the responsibility by using condoms for 3 months while his wife takes a rest from the pill. He thinks that barriers to the use of OCs are the inability of lower class women to take pills regularly and the logistics of cost and followup. He does not seem concerned about serious side effects of OC use.

Dr. N.N. Roy Choudhury is president of the Calcutta branch of the Indian Medical Association. He was very definite in expressing his opinion regarding nonclinical distribution of OCs. He said that it is the only way to go and that pills should be delivered to the house by the village worker. He countered the charge of possible misuse of the supplies by OC users by saying that there will be no incentive to the user to sell the OCs to get cash once the pills are made easily and widely available. He thinks that users (and nonusers) should be encouraged to come to the health centers for check-ups not solely because of OC use, but for reasons of general health, nutrition, child immunization, etc. In this way OC effects could also be monitored. In his opinion the hazards of OC use are not so great, particularly in Indian communities, as to warrant very close monitoring. The one exception is OC use coincident with amoebic hepatitis or jaundice. These conditions are difficult to determine on the basis of history alone. I forgot to ask him what the risk of pregnancy was to an amoebic liver. I asked him whether he was unique among doctors in his attitude toward nonclinical distribution of OCs. He said he did not know.

He strongly recommended that I attend the All India Ob-Gyn Congress to be held in Calcutta, December 29-31, 1981, at which there will be scientific sessions on steroidal contraceptives every day from 2 to 4 p.m. On the 31st of December there will be a panel discussion from 9.45 to 11.15 a.m.

He said that if I can promise to attend he would make arrangements for me to present a lecture and participate in the panel discussion.

The third physician I talked with was Dr. K. M. Gun, obstetrician-gynecologist. He appeared to have no strong convictions either for or against nonclinical distribution of OCs. It was late evening and he was still seeing patients, so we had only a brief interview. He referred me to a paper he had written on rural distribution of OCs presented at the 1974 International Conference on Family Planning. The paper was published in the Conference Report and is entitled "Study on Norgestrel EE (500/50) in an Urban Low-Income Group."

11. CBD Project, Institute of Medical Sciences, Varanasi, November 13-14, 1981

I was received at the Varanasi airport by Mr. N.S.N. Rao, project coordinator for the community based distribution (CBD) OC project. I spent the afternoon with Prof. Tiwari, and met with members of his staff. Prof. Tiwari gave me a general review of the project, which has been in progress for 3 years in the Department of Preventive and Social Medicine, Institute of Medical Sciences. It is supported by FPAI. Its aim is to establish a community-based infrastructure for storage, supply, distribution, and followup of oral pills and condoms, along with the provisions for primary health care and integrated rural development.

In the evening Prof. Tiwari and staff showed me around the campus of the Banaras Hindu University. The medical school at the University was originally ayurvedic but is now allopathic. However, ayurveda is still taught and a synthesis

of the two systems has come about. According to Prof. Tiwari, there exist in India practitioners of pure ayurveda and those who combine the two systems.

On November 14, 1981, Prof. Tiwari and his staff took me by jeep to visit their rural health project sites in a village. A review of their project by Prof. Tiwari and associates is included among the papers presented at the ICMR workshop on availability of contraceptives. Copies of these are attached. Also attached are copies of their semiannual and annual reports. The depot worker (voluntary) in charge of one of the centers is the local ayurvedic practitioner; in charge of the other center is an agriculturist (9 acres of land irrigated by pumped well water and devoted to market gardening). He described to us his use of modern chemical fertilizers and pesticides.

I talked through an interpreter with an OC acceptor who had borne two children, one of which had died. She said she was taking OCs in order to space her family. I saw examples of self-help cottage industries that had been sponsored with seed money (interest-free loans for capital financing) from the Varanasi CBD project: in one hut a supervisor and his group of young boys were packaging incense sticks; in another a young man was making colored glass beads by heating glass rods over a kerosene flame air-blown by means of a foot-pumped bellows. On our way back we stopped briefly at the Community Health Center and met the Center staff, including the physician-in-charge.

In the afternoon I gave a lecture to about 30 students and staff members. After the lecture was over I met for a final discussion with Prof. Tiwari, Dr. S.D. Gaur (reader in the department) and other members of the staff. In response to my questioning, Prof. Tiwari said that it is too early to tell whether the village CBD program had developed sufficiently to be self-sustaining. He thought it will require about five years before reaching that point. Their program has demonstrated that there is an unmet need for OCs existing in U.P. villages but there is also a great need to stimulate CBD programs in similar areas. This of course means that there will be a continuing need for supplies of OCs. Prof. Tiwari said that support for the program now comes from FPAI, but he would be interested in knowing if support could be had from USAID. He also wanted to know whether an exchange program could be developed between his department and a corresponding department in a U.S. school such as his department currently has with a school in Liverpool.

He showed me copies of M.D. theses written by postgraduate students in his department on studies carried out within the CBD project. I did not have the time to look these over in any detail. Some of the authors and titles are as follows:

1. Satish Kumar, "Evaluation of Maternal and Child Health Services of Three Primary Health Centers covered by Institute of Medical Sciences," Banaras Hindu University, September 1978.

2. Shri Prakash Singh, "Profiles of Potential Acceptors of Oral Contraceptives in the Community Based Distribution Project," Varanasi,

January, 1981.

3. S.S. Reshmi, "An Action Research Study of Distribution of OCs through Different Types of Depot Holders under Varanasi Community Based Distribution Project," January, 1981.

4. R. Ravi, "Assessment of Performance of Community Health Volunteers in a Rural Area," January, 1981.

I asked Prof. Tiwari if he would like to have the reprint file on side effects of oral contraceptives that had been collected from the English language literature by the Walnut Creek Contraceptive Drug Study over the period 1968-1979. He was eager to have it and wrote me a letter of acceptance. I told him that I would discuss the matter with the directorof the International Fertility Research Program and with the chief of the Population Office, USAID to determine whether they could assist in transporting the files from California to Varanasi. I was informed by Dr. Satish Kumar, one of Prof. Tiwari's associates, that epidemiologic and public health textbooks are not obtainable at book stores in India. The stores do not stock these books because there is low demand for them. I could offer no solution to the problem.

12. All India Institute of Medical Sciences, Dr. Vira Hingorani, New Delhi. November 18, 1981

I addressed a small group of postgraduate students in the office of Dr. Hingorani. There was much interest in my talk on the part of the young physicians. From some of their questions I could once more sense the concern

of most medical persons over the well-publicized hazards of OC use--in particular venous thromboembolism, although no one had ever seen a case.

13. USAID/HPN, New Delhi, November 24, 1981

At an informal meeting with some staff members of HPN and the Program Office at USAID, I discussed my findings about the attitudes of some of the prominent Indian doctors toward nonmedical distribution of oral contraceptives. My position was that we should not take lightly the doctors' resistance to nonmedical distribution of pills. My preliminary impression of physicians' attitudes was that they all appeared to be well acquainted with the information about OC risks that appear in the medical journals from the United Kingdom, and that they seemed to accept most of this information uncritically and without questioning. Yet many of them appeared to agree that serious side effects of OCs have been exaggerated and are not relevant to the Indian environment. My impression was that Ob-Gyn specialists are not the principal prescribers of OCs in India. The pills are most frequently prescribed by general practitioners. But the nonspecialists usually take their direction from the Ob-Gyn specialists. Therefore the opinions of prominent and influential gynecologists must be given great weight when one attempts to assess the possible impact of governmental efforts to bring about widespread distribution of OCs. Planners who fail to take into account the guidelines for selecting or excluding users of OCs that are recommended by leading gynecologists

might very well find their best-laid plans and programs to be fruitless.

14. Family Planning Association of India, Bangalore, December 5, 1981

I was able to meet and talk with Dr. Krishna Rao, Zonal Director, FPAI of South India.* He used to be with FPAI, Bombay, and before that with the Government of India Ministry of Health and Family Welfare as their malaria control expert. He was then put in charge of the family-planning program. He said that the government thought that because he had carried out such a successful program in malaria control, he would be able to apply the same methods to family planning. But they were wrong—family planning is much more complex, he said, and cannot be approached solely as use of contraceptives. Rather, it must operate within the context of a community development program and requires an "integrated infrastructure" with dedicated, motivated personnel who are thoroughly familiar with the customs of the community.

In their own (FPAI) rural project, they act as a catalyst and provide seed money for development projects in sericulture and keeping of dairy cows, bring in experts to provide technical advice, arrange contracts for distribution of produce (e.g., milk), and so forth. FPAI policy was changed some years ago, and for the past five years they have functioned as promoters and catalysts, working along with government-sponsored programs with the

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purpose of getting the community involved in the program. Dr. Rao was of course very pleased that their approach had proved quite successful, but he stressed the complexity and magnitude of the population and development problems in India—a complex interaction in a heterogeneous nation functioning through a democratic process. He showed a restrained optimism that was fully cognizant of the difficulties, learned during his many years of experience in the governmental and the private sector, of implementing programs in India. In his opinion the problems of implementation at the local level cannot be easily grasped at the central governmental level because of the great variation in conditions in the different regions of such a large and complex nation. Use of oral contraceptives was consequently only a very small part of a comprehensive program.

In their program, the FPAI recommends the use of temporary contraceptive methods (IUD condoms and orals) for the 22 percent among the eligible couples who have 1 to 2 children. For the 58 percent with 3, 4, and more children, male or female sterilization are the methods of choice. He said that OC experience of other countries cannot be directly applied to Indian conditions. This is because of the possible effect of OC use on nutritional deficiencies in Indian women, differences in the retention and elimination of a given dose of OCs between Indian women and those of other ethnic groups, and the different impact of sociodemographic factors as determinants of fertility in Indian communities.

He described one aspect of their rural project that has to do with the formation of "youth clubs" that include men and women under 35 years of age. FPAI's aim is to achieve a suitable distribution ration of clubs to population so that the clubs might serve effectively as a means of education. FPAI's goal is to increase the prevalence rate of contraceptors from 8 percent to 42 percent within 5 years.

In the afternoon I met Mrs. Leelavathi Chandrashekar, president of FPAI Bangalore branch, who was very eager to have me talk with some of the doctors who were there.

I attempted to give a brief, general review of the Walnut Creek Study, but the time was short, and most of the audience had specific, pressing questions about OC safety that they could not contain. So we discussed these instead: postpill amenorrhea and sterility, malnutrition and vitamin deficiency as a contraindication to pill use, the supposedly deleterious effect of continuous long use, the question of a male oral contraceptive, the resistance of some men to their wives' use of OCs (some women have to conceal their use of OCs from their husbands, they said, and they wanted to know whether the women in our population would let their husbands know they were taking OCs), male prejudices against vasectomy (they were extremely interested to learn about the high prevalence -- 25 percent -- of vasectomy in the Walnut Creek population of males 35 to 50 years of age), the reported increased risk of heart attacks in vasectomized men.

They seemed very relieved to learn about the evidence indicating that OC risks had been exaggerated, that young, healthy, nonsmoking women had little or no risk from OC use, and that there was no evidence of increased risk of cancer in OC users. I got the impression here as elsewhere (FPAI Bombay, Vellore Midecla College), that young female physicians are keenly interested in obtaining updated information about OC effects.

15. The University Women's Association of Dehra Dun, Dehra Dun, December 21, 1981

The visit was arranged by Dr. Amala Choudhuri, pediatrician and geneticist (and my sister) and I was invited by the Association to give a talk on oral contraceptives to a small group of members. The Dehra Dun Association is affiliated with the Indian Federation of University Women's Association, a member of the International Federation of University Women. My presentation was nontechnical and quite informal. The women's questions and comments indicated, not surprisingly, that they derive their information about OC side effects from newspaper and magazine reports that they accept without questioning. They were surprised to learn that many of the reported "facts" about OCs are not true.

16. Twenty-fifth All India Obstertric and Gynaecological Congress, Calcutta, December 29-31, 1981: Panel Discussion on Steroidal Contraceptives

The panel members presented a range of opinion, but the entire range was overcautious. One exception was Dr. A. Padma Rao, an outspoken, mature lady doctor, who seemed to me to have a more realistic, practical approach.

It is possible that her practice is not totally confined to the upper-class urban society that appears to be the group among whom many of the panel members work.

The panel spent much time discussing the length of time each member would recommend keeping a woman on the pill - 3, 6, 9, 12, 18 months, etc. No scientific or medical criteria were cited; each was simply asked what is his or her usual practice. I had the impression that the practice of these experts carries more weight than does the state of sientific knowledge. I don't think we should dismiss this lightly. I rather think that their policies reflect experience culled from many years of practice, which has made them familiar with a host of sociocultural attitudes and beliefs. There are, no doubt, more powerful determinants of patients' compliance than exposure to facts based on scientific studies.

The panel members were much concerned about the occurrence of amenorrhea in their OC users. I gathered from their discussion, as I had previously gathered in talking with doctors in other parts of the country, that women become very anxious over any unexpected change in the length of their menstrual cycle, number of days of menses, amount of flow, etc. The doctors therefore seem to be reflecting what may be a real concern on the part of their patients. Some research into the background of this behavior would be useful. Perhaps Prof. Tiwari's group at Varanasi might consider

it a worthwhile area to investigate. One idea that occurs to me is that, because most women have no easy access to pregnancy diagnostic tests, they rely on the missed periodas their only indicator of pregnancy. Any irregularity in menstrual cycle pattern would therefore become a source of confusion and anxiety. A possible control village community for such a study could be one in which inexpensive pregnancy diagnostic tests are made readily available and free of charge to women.

The other area of concern among the members is the prescribing of OCs for the married teenager, particularly if she has not borne her first child. Most advise against it; although Dr. Padma Rao stated that she would prescribe OCs if the couple seems in need of help.

KEYNOTE SPEECH PRESENTED AT PANEL DISCUSSION ON STERIODAL CONTRACEPTIVES, XXVTH ALL INDIA OB.-GYN. CONGRESS, CALCUTTA, DEC. 31/81

Savitri P. Ramcharan, M.D., Ph.D.

INTRODUCTION

(HOW I CAME TO BE HERE...)I WAS THE DIRECTOR OF THE LARGEST, MOST COMPREHENSIVE PROSPECTIVE STUDY OF THE SIDE EFFECTS OF ORAL CONTRACEPTIVES IN THE U.S. THIS STUDY, THE WALNUT CREEK CONTRACEPTIVE DRUG STUDY, WAS SUPPORTED BY THE NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT, LASTED FOR 12 YEARS AND WAS TERMINATED IN 1980. SINCE THEN I HAVE BEEN A CONSULTANT WITH THE INTERNATIONAL FERTILITY RESEARCH PROGRAM, NORTH CAROLINA, U.S.A. I CAME TO INDIA IN MID-OCTOBER THROUGH COURTESY OF THE GOVERNMENT OF INDIA, HEALTH MINISTRY AS A CONSULTANT WITH THE USAID TO COMMUNICATE THE RESULTS OF MY STUDY TO PROFESSIONAL, MEDICAL AND FAMILY PLANNING GROUPS. I HAD WORKED FOR THE GOVT. OF INDIA AS A SCIENTIST IN THE CONTRACEPTIVE TESTING UNIT OF THE FAMILY PLANNING RESEARCH CENTER IN BOMBAY IN 1955-56. THIS UNIT SUBSEQUENTLY BECAME WHAT IS NOW THE INSTITUTE FOR RESEARCH IN REPRODUCTION IN BOMBAY.

MY VIEWS ARE MY OWN; I DO NOT REPRESENT THE U.S. GOVT. OR THE INDIAN GOVT. IN PERSONAL LIFE, I AM A

PRIVATE CITIZEN; IN PROFESSIONAL LIFE I AM A PHYSICIAN (NOT OB-GYN), AN EPIDEMIOLOGIST AND MEDICAL RESEARCHER. I AM AN OVERSEAS INDIAN, BORN IN TRINIDAD, WEST INDIES, MARRIED A SOUTH INDIAN PHYSICIAN, DR. N. PURSHOTTAM, WHO WAS DEDICATED TO THE BETTERMENT OF THE HEALTH OF WOMEN AND CHILDREN IN HIS COUNTRY. THROUGH HIM, I CAME TO WORK ALSO IN THE FIELD OF FAMILY PLANNING. I CAME TO OC RESEARCH EXPECTING TO CONFIRM REPORTED OR SUSPECTED ADVERSE EFFECTS OF OC'S BECAUSE MOST OF US AS PHYSICIANS WHO WERE FAMILIAR WITH THE EFFECTS OF ESTROGENS ON CANCER AND MYOCARDIAL INFARCTION IN ANIMAL AND HUMAN STUDIES, WERE CONCERNED ABOUT THE POSSIBLE RISKS OF OC USE. BUT I HAVE ALWAYS IN MY WORK AS A RESEARCHER TRIED TO MAINTAIN AN OBJECTIVE MIND - TO KEEP THE OPEN MIND OF A SCIENTIST.

SOME FEATURES THAT SEEM TO ME TO MAKE THE WHOLE FIELD OF OC'S UNIQUE:

1. SOCIAL ASPECTS - OC'S ARE THE MOST EFFECTIVE REVERSIBLE METHOD OF CONTRACEPTION KNOWN; THEY GIVE WOMEN THE FREEDOM TO CHOOSE IF AND WHEN TO BEAR A CHILD.

2. MEDICAL AND SCIENTIFIC ASPECTS - UNDESIRABLE SYSTEMIC SIDE EFFECTS OCCUR IN HEALTHY WOMEN WHO ARE EXPOSED TO POTENT DRUGS FOR PROLONGED PERIODS OF TIME.

3. POLITICAL ASPECTS - OC'S WERE LICENSED FOR USE BY GOVERNMENTAL DRUG REGULATORY AGENCIES (FDA IN THE U.S.)

- GOVERNMENTAL AGENCIES MAKE IT AVAILABLE (EITHER FREE OR SUBSIDIZED) TO SEGMENTS OF THE POPULATION.

4. LEGAL ASPECTS - IN THE U.S. LIABILITY FOR ADVERSE EFFECTS IS ON DRUG MANUFACTURERS, PHYSICIAN PRESCRIBERS, AND HOSPITALS.

5. ETHICAL, MORAL AND RELIGIOUS ASPECTS - THESE MAY GIVE RISE TO MUCH EMOTIONAL REACTION.

- SOME PEOPLE CLAIM THAT OC'S MAY CAUSE "DEATH" OF A "LIFE" AS A FERTILIZED OVUM, THIS IS THE OPINION OF THE "RIGHT TO LIFE" GROUP.

- SOME PEOPLE CLAIM THAT BECAUSE OC'S BRING ABOUT SEPARATION OF SEXUAL AND REPRODUCTIVE FUNCTIONS IN WOMEN, THIS MEANS THAT FOR MANY WOMEN FEAR OF PREGNANCY IS NO LONGER A DETERRENT TO SEXUAL ACTIVITY, SOME PEOPLE FEAR THAT THIS WILL LEAD TO A BREAKDOWN IN THE MORAL AND RELIGIOUS VALUES OF A SOCIETY.

ALL OF THESE FEATURES ARE NOT UNIQUE TO OC'S. BUT TAKEN TOGETHER, AND MORE SO WHEN CONSIDERED IN TERMS OF THE IMMENSE NUMBERS OF WOMEN AFFECTED (TENS OF MILLIONS WORLDWIDE), THEY TEND TO FOCUS ATTENTION ON OC'S - TO MAKE THEM NEWSWORTHY. ANOTHER EXAMPLE OF A SCIENTIFIC BREAKTHROUGH WITH THE POTENTIAL FOR

CREATING A MAJOR UPHEAVAL IN SOCIETY IS "GENETIC ENGINEERING".

REVIEW OF THE WALNUT CREEK CONTRACEPTIVE DRUG STUDY:

THIS WAS A PROSPECTIVE, EPIDEMIOLOGIC STUDY OF THE NON-CONTRACEPTIVE EFFECTS OF OC'S. ITS AIM WAS TO ASSESS THESE OC EFFECTS BY COMPARING BIOCHEMICAL AND PHYSIOLOGICAL TEST MEASUREMENTS, AND THE INCIDENCE OF DISEASE AND CAUSES OF DEATH, IN USERS AND NON-USERS OF THESE DRUGS. THE STUDY POPULATION CONSISTED OF 16,638 WOMEN, 18 THROUGH 54 YEARS OF AGE, WHO WERE MEMBERS OF THE KAISER FOUNDATION HEALTH PLAN OF NORTHERN CALIFORNIA AND LIVED IN SUBURBAN COMMUNITIES NEAR SAN FRANCISCO. WOMEN BECAME STUDY SUBJECTS BY HAVING A HEALTH CHECKUP EXAMINATION DURING DECEMBER 1968 THROUGH FEBRUARY 1972 AT THE KAISER - PERMANENTE MEDICAL CENTER IN WALNUT CREEK, CALIFORNIA. USE OF CONTRACEPTION WAS NOT A CRITERION FOR ENTRY INTO THE STUDY.

THE POPULATION WAS MAINLY WHITE, MARRIED, AND MIDDLE CLASS. AT THE TIME OF ENTRY, 28% OF THE WOMEN WERE CURRENT USERS OF OC'S, 33% WERE PAST USERS, AND 39% WERE NEVER USERS. BY 1976-77, ABOUT 88% OF THE WOMEN WERE UNDER FOLLOW-UP, 4% HAD DECLINED TO PARTICIPATE IN THE STUDY, AND 8% COULD NOT BE LOCATED.

INITIAL CLINICAL LABORATORY MEASUREMENTS SHOWED SMALL BUT STATISTICALLY SIGNIFICANT DIFFERENCES BETWEEN CURRENT USERS AND NON-USERS IN LEVELS OF BLOOD PRESSURE, PULSE RATE, SERUM CHOLESTEROL, GLUCOSE TOLERANCE, SERUM ELECTROPHORETIC FRACTIONS, AND RHEUMATOID FACTOR; ALSO IN BLOOD COAGULABILITY, HEMATOLOGICAL AND AUDIOMETRIC MEASUREMENTS, AND PREVALENCE OF ASYMPTOMATIC BACTARIURIA. USERS DID NOT DIFFER FROM NON-USERS IN SPIROMETRIC MEASUREMENTS OR IN THE PREVALENCE OF DEPRESSION. THE CHANGES ASSOCIATED WITH OC USE WERE OF NO CLINICAL IMPORTANCE (SLIDE NO. 1, SHOWING GLUCOSE LEVELS IN USERS AND NON-USERS BY AGE), WERE NOT CONFIRMED IN SMALL SUBGROUPS OF OC USERS (SLIDE NO. 2 SHOWING FREQUENCY DISTRIBUTION CURVES FOR SERUM GLUCOSE LEVELS FOR USERS AND NON-USERS), AND APPEARED TO BE REVERSIBLE ON DISCONTINUANCE OF DRUG USE (SLIDE NO. 3 SHOWING GLUCOSE LEVELS BY MONTHS SINCE LAST PILL USE). RESULTS WERE PUBLISHED IN MEDICAL JOURNALS AND WERE COMPILED IN THE FORM OF VOLS. I AND II OF THE WALNUT CREEK DRUG STUDY MONOGRAPH SERIES.

WE EVALUATED THE EFFECT OF OC USE ON MAJOR CAUSES OF HOSPITALIZATION AND DEATH. A COMPREHENSIVE REPORT WAS PUBLISHED IN VOL. III OF THE MONOGRAPH SERIES.

THE WEIGHT OF THE EVIDENCE FROM THE WALNUT CREEK STUDY AND OTHER STUDIES NOW INDICATES THAT THE RISKS OF OC'S HAVE BEEN EXAGGERATED NOT ONLY BY THE COMMUNICATIONS MEDIA, BUT BY THE RESEARCHERS AND EPIDEMIOLOGISTS AS WELL. TO DATE, THERE HAS BEEN NO DEFINITE EVIDENCE LINKING OC USE WITH ANY FORM OF CANCER. MOREOVER, SUBSTANTIAL EVIDENCE HAS BEEN ACCUMULATING OF REDUCED RISKS OF ENDOMETRIAL, CANCER, OVARIAN CANCER, FIBROCYSTIC DISEASE OF THE BREAST, RHEUMATOID ARTHRITIS, AND IRON DEFICIENCY ANEMIA IN OC USERS. THE REPORTED INCREASED RISK OF MYOCARDIAL INFARCTION IN OC USERS OCCURS MAINLY IN OLDER WOMEN WHO SMOKE CIGARETTES.

THE HIGHER DEATH RATES IN OC USERS WHICH WERE REPORTED BY THE ROYAL COLLEGE OF GENERAL PRACTITIONERS STUDY WAS ACCOUNTED FOR PRINCIPALLY BY A FEW DEATHS FROM SUBARACHNOID HAEMORRHAGE. BUT THE COMMITTEE ON SAFETY OF MEDICINES, LONDON, FOUND NO CHANGE IN THE ANNUAL MORTALITY FROM THIS DISEASE SUCH AS WOULD HAVE BEEN EXPECTED IF THE RISKS IN OC USERS HAD BEEN INCREASED, IN THE PAST 20 YEARS. FURTHERMORE, THE RESULTS OF A CASE-CONTROL STUDY OF DEATHS DUE TO SUBARACHNOID HEMORRHAGE IN 1976, CARRIED OUT BY THE COMMITTEE ON SAFETY OF MEDICINES, SHOWED NO INCREASE IN RISK OF DEATH ASSOCIATED WITH OC USE.

IN THE WALNUT CREEK STUDY WE FOUND NO SIGNIFICANT DIFFERENCES IN DEATH RATES, BETWEEN USERS AND NONUSERS, OVERALL, OR FROM SPECIFIC CAUSES (SLIDES NO. 4 AND 5) IN PARTICULAR FROM CIRCULATORY DISEASES. IT IS POSSIBLE THAT THE NUMBER OF WOMEN AFFECTED WAS TOO SMALL TO MAKE THE RISK MEASURABLE IN A POPULATION OF THIS SIZE. BUT WHEN THE SAME NUMBER OF DEATHS WAS EXAMINED IN RELATION TO SMOKING AND TO DRINKING, WE FOUND SIGNIFICANTLY HIGHER RISKS OF DEALTH FROM ALL CAUSES AND FROM CIRCULATORY DISEASES IN SMOKERS COMPARED TO NON-SMOKERS, AND SIGNIFICANTLY REDUCED RISKS OF DEATH FROM CIRCULATORY DISEASES IN DRINKERS COMPARED TO NON-DRINKERS. WE THEREFORE CONCLUDED, THAT IN OUR GROUP OF HEALTHY, YOUNG-ADULT WOMEN, THE SERIOUS RISKS ASSOCIATED WITH OC USE WERE EXTREMELY SMALL, AND THAT OTHER FACTORS SUCH AS SMOKING AND DRINKING WERE MORE IMPORTANT DETERMINANTS OF MORBIDITY AND MORTALITY THAN WAS THE USE OF ORAL CONTRACEPTIVES.

SOME FACTORS THAT MAY ACCOUNT FOR THE EXAGGERATION IN RISKS

1. HIGHER ESTROGEN DOSAGE IN EARLY OC FORMULATIONS.
2. BECAUSE OF KNOWN BIOLOGICAL EFFECTS OF ESTROGENS, THERE WAS HIGH EXPECTATION OF OC RISKS IN EARLY YEARS. GOVERNMENTAL REGULATIONS WARNED PHYSICIANS

WHAT ADVERSE EFFECTS TO EXPECT AND REQUIRED THEM TO REPORT SAME. THESE EARLY CASE REPORTS FORMED THE BASIS OF THE FIRST REPORTED RISKS OF OC'S AND LED TO EPIDEMIOLOGIC STUDIES.

3. PROBLEMS ARISING OUT OF EPIDEMIOLOGIC STUDIES. THESE MAY BE DUE TO BIASES OF SAMPLE SELECTION, REPORTING OF OC USE BY PATIENTS, DIAGNOSIS OF DISEASE BY PHYSICIANS, OR SUBJECTIVITY IN INTERPRETING THE DATA BY RESEARCHERS. IN ADDTION SERIOUS DISEASES ARE RARE IN WOMEN OF REPRODUCTIVE AGE, AND STATISTICAL ANALYSIS IS HANDICAPPED BY SUCH SMALL NUMBERS. EXAMPLE: MYOCARDIAL INFARCTION; PERHAPS LIVER COMA IN THEIR POPULATIONS.

4. MECHANISM FOR AWARDING RESEARCH GRANTS AND CONTRACTS - GRANTING AGENCIES SUPPORT THOSE STUDIES WHICH SHOW PRELIMINARY FINDINGS OF ADVERSE EFFECTS OF THE DRUGS. CAN YOU IMAGINE AN AGENCY GIVING FUNDS TO SUPPORT A STUDY IN WHICH THE INVESTIGATOR PROPOSED TO TEST THE HYPOTHESIS THAT THE PILL INCREASED THE GENERAL FEELING OF WELL-BEING IN THE MAJORITY OF WOMEN WHO TAKE OC'S?

5. PRESSURES ON YOUNG FACULTY MEMBERS IN ACADEMIC INSTITUTIONS TO "PUBLISH OR PERISH".

6. THIS IS IN TURN LINKED WITH THE CURRENT EDITORIAL PRACTICES IN MEDICAL JOURNALISTIC CIRCLES TO PUBLISH ONLY "POSITIVE RESULTS", WHICH IS ANOTHER NAME FOR FINDINGS OF ADVERSE EFFECTS; AND TO HAND OUT NEWS RELEASES TO THE MASS COMMUNICATION MEDIA ON THE DAY PRIOR TO THE JOURNAL ISSUE. INFORMATION ABOUT SUCH ADVERSE EFFECTS REACH THE GENERAL PUBLIC BEFORE THE PHYSICIANS CAN HAVE ACCESS TO THE MEDICAL LITERATURE.

7. THE INFLUENCE OF THE MASS MEDIA: THEIR MAIN EFFORT IS TO SELL THEIR MEDIA - ADVERTISEMENT SPACE IN MAGAZINES AND NEWSPAPERS, AND TIME ON RADIO AND TV ARE PRICED ACCORDING TO THE SIZE OF THE CIRCULATION OR THE NUMBER OF LISTENERS OR VIEWERS. THE MASS MEDIA THEREFORE FOCUS ON NEWSWORTHY ITEMS WHICH TEND TO DEAL WITH DANGER, DESTRUCTION OR DEATH.

WHAT RECOMMENDATIONS CAN WE MAKE ABOUT OC USE

1. OC'S HAVE LITTLE OR NO RISKS TO YOUNG, HEALTHY, ACTIVE, NON-SMOKING WOMEN IN DEVELOPED COUNTRIES. THERE IS NO REASON TO DOUBT THAT THIS WILL ALSO HOLD TRUE FOR YOUNG, HEALTH, ACTIVE WOMEN IN INDIA. BUT THERE ARE DIFFERENCES AMONG COUNTRIES AND AMONG REGIONS IN YOUR OWN COUNTRY WITH RESPECT TO SOCIAL CUSTOMS, PREVALENCE OF DISEASE AND NUTRITIONAL STATUS; THEREFORE CONTINUING RESEARCH AMONG YOUR OWN POPULATIONS IS NECESSARY.

BUT RESEARCHERS WILL HAVE TO BE ALERT TO THE PITFALLS IN THE DESIGN AND CONDUCT OF EPIDEMIOLOGICAL STUDIES, AND IN THE ANALYSIS AND INTERPRETATION OF THE DATA. YOU HAVE NO LACK OF HIGHLY MOTIVATED AND COMPETENT YOUNG RESEARCHERS TO CARRY OUT THIS TASK. BUT BECAUSE EPIDEMIOLOGIC RESEARCH WILL BE NEW TO MANY OF THEM, ADDITIONAL TRAINING FOR THEM WILL BE NECESSARY. I LISTENED TO SEVERAL OF OF THEM PRESENT PAPERS IN THE AFTERNOON SESSIONS ON STEROIDAL CONTRACEPTIVES, AND I WOULD LIKE TO CONGRATULATE THOSE YOUNG MEN AND WOMEN ON THE EXCELLENCE OF THEIR WORK AND THEIR PRESENTATIONS.

2. BECAUSE OF THE PRESSING NEED FOR EFFECTIVE METHODS OF CONTRACEPTION, WE SHOULD WEIGH THE RISKS AND BENEFITS OF OC USE. WE MUST GUARD AGAINST PERFECTIONIST, UNREALISTIC EXPECTATIONS OF ABSOLUTE SAFETY IN THE USE OF OC'S WHILE IGNORING THE TREMENDOUS BURDEN OF DISEASE AND DEATH PLACED ON MOTHERS AND THEIR CHILDREN BECAUSE WOMEN ARE UNABLE TO DETERMINE THE NUMBER AND SPACING OF THEIR CHILDREN.

3. WE SHOULD MAINTAIN A HEALTHY SKEPTICISM WHEN VIEWING THE RESULTS OF STUDIES OF THE SIDE EFFECTS OF OC'S, EVEN WHEN THE RESULTS COME FROM THE MOST PRESTIGIOUS UNIVERSITIES IN THE WORLD. HASTY READING OF THE CONCLUSIONS IS NOT ENOUGH. CAREFUL SCRUTINY OF THE METHODS FOR COLLECTING THE DATA IS NECESSARY. OFTEN THESE ARE IN FINE PRINT OR ARE NOT PROVIDED.

4. BECAUSE OF THE IMMENSITY AND COMPLEXITY OF FAMILY PLANNING NEEDS IN YOUR COUNTRY, A CLOSE COLLABORATION OF ALL AVAILABLE GROUPS OF HEALTH PROFESSIONAL AND CONCERNED CITIZENS IS NECESSARY. PERSONAL AND PROFESSIONAL SPECIAL INTERESTS MUST TAKE SECOND PLACE NEXT TO THE PRESSING SOCIAL NEEDS FOR THE HEALTH AND WELFARE OF THE MAJORITY OF MOTHERS AND THEIR CHILDREN, WHO ARE INDEED THE NATION'S

FUTURE. IN THIS WORK YOUR ORGANIZATION HOLDS A CENTRAL, KEY POSITION; YOUR PROFESSIONAL EXPERTISE AND GUIDANCE ARE CRITICAL REQUIREMENTS FOR THE SUCCESSFUL IMPLEMENTATION OF A NATIONAL PROGRAM WHICH ATTEMPTS TO MAKE THE CHOICE OF FAMILY SIZE AND SPACING AVAILABLE TO EVERY WOMAN.