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REPORT OF CONSULTATION TO
AFRICAN MEDICAL STUDENTS ASSOCIATION
1975 CONFERENCE
LUSAKA, ZAMBIA

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REPORT OF CONSULTATION TO
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Introduction

At the request of the African Medical Students Association (FAMSA), the American Public Health Association, through an agreement with the U.S. Agency for International Development, arranged for this consultant to address and consult with the attendees of the 1975 FMSA Conference. The meeting was held in Lusaka, Zambia, on October 11 through 18, 1975.

Dr. Shattock from the Liverpool School of Tropical Medicine, Ms. Rebecca Cook of the London Office of IDPF, Professor Marti of the Obstetrics and Gynecological Department of Nairobi Medical College and this consultant served as resource people for the various workshops. The workshop themes dealt with the involvement of medical students in family planning clinics and programs and their role in influencing governments and responsible officials to adopt various population stabilization policies.

The paper, "Family Planning in the USA - The 1975 Experience", was well received by the delegates and prompted much interesting comment, largely related to fostering morality among teenagers. There were several misconceptions voiced about how Americans viewed childbirth. One of the more surprising was that American women resorted to abortion because they feared the pain of labor and childbirth. It was pointed out that the majority of abortions were performed under local anesthesia and were not without some discomfort. But more importantly, there is insistence on the part of an increasing number of American women to have natural childbirth with its resultant patient awareness of all the events surrounding delivery and its culmination in the delivery of an alert infant, unaffected by analgesic and anesthetic drugs given to the mother.

There still seems to be a lot of pronatalist attitude, even among African medical students. A notable exception was the delegation from Tanzania which voiced strong opinions on the value of family planning to "successful national building". They stressed self-help by child sparing, limitation of family size, decentralization of authority ("Ujama Villages") and non-dependence on foreign aid.

The following is the text of the paper that was presented to the student delegates. A copy of the Conference agenda appears as an appendix to this report.

FAMILY PLANNING IN THE USA - THE 1975 EXPERIENCE

It is indeed a pleasure to have the opportunity to address this gathering and to report on some of the current American experiences relating to family planning. Although it is as difficult to compare family planning experiences, methodology and results from different milieux as it is to compare oranges and locomotives, it is nevertheless valueable to share relevant information. By sharing we gain mutual appreciation of other philosophies, goals and aspirations, as well as of their constraints and value systems. To share is to learn.

Although time will not permit a complete compilation of all the current and recent family planning related information, I hope in the time allotted to give you an overview of some of the more important trends from the perspective of one who has strong concerns regarding the global importance of improved maternal and child health. The first portion of my presentation will deal with the family planning milieu and philosophy in America, while the remainder will deal more with the more technical aspects of family planning.

It is important to remind you that many of the facts to be related pertain particularly to the States of California and New York which seem to be in the vanguard of the states accepting new approaches to family planning. These states are one and two respectively in population, and together contain 20 percent of the nation's 215 million people. They are situated on opposite coasts of the 3,000 mile wide continent, and in between there are many states and communities with varying cultural patterns, ethnic compositions and local customs. Although California and New York, with a few other states, are leading the way in family planning innovation, most other states are following, some rapidly, some more slowly, but all with government encouragement.

I. CURRENT TRENDS IN FAMILY PLANNING PHILOSOPHY

A. More Female Involvement

In keeping with rising aspirations of women throughout the world, such as was demonstrated at the recent meeting in Mexico City, American women are demanding to be heard, and are being

heard. They are seeking and gaining seats on boards, commissions and committees which are making decisions about the distribution of family planning services, as well as decisions about health priorities. Since family planning services and research are primarily directed toward female fertility, they are demanding a voice, and I think rightly so, in decisions which so intimately affect their lives and the lives of their sisters and daughters. A current grim reminder of the dangers to which women have been accidentally exposed by predominately male researchers and practitioners is the diethylstilbestrol story. This synthetic and inexpensive female hormone, which was prescribed with reckless abandon for pregnant women in the 1940's and 1950's, is believed responsible for the development of vaginal adenosis, a potentially pre-cancerous lesion in the female offspring of these women. Alert clinicians now carefully screen all women under 30 years of age who have a history suggestive of exposure in utero to this drug. The drug, incidentally, was proved ineffective in salvaging pregnancies as was originally hoped.

A fitting example of the growing importance of women in this field of service primarily directed toward women, is the fact that a Vice President of the Planned Parenthood Federation of America and Director of its medical services is a female. Dr. Tyrer is indirectly responsible for the family planning care for almost a million American women in the private sector. Lest we be misled by the often inappropriate publicity given to the ultra-feminists, some of whom are also anti-male, it is important to note that there are increasing numbers of talented and concerned women who are demanding to be heard, but who are doing it in a dignified and cooperative spirit which can no longer be ignored.

B. More Patient Education

With the high rate of literacy in America, it is unfortunate that not more people are as properly informed about their bodies and their health as they are about the latest fashions or social trends. As a result, our legislators and health

educators and even lawyers, much to the dismay of some careless practitioners, are seeing to it that patients and family planning clients, are given all the facts with which to make decisions about their health and contraceptive care. They must be informed about the potential hazards of certain procedures and drugs, and must be made aware of danger signs and signals, and must be knowledgeable of the strengths and weakness of various contraceptive modalities. It has been amply demonstrated that women or couples who are allowed to make an informed choice of contraceptive methods are more likely to use said method correctly and for longer periods of time. Happily gone is the day when a doctor can blithely say without explanation, "I think this is the best method for you". Large malpractice awards have been made to people who were forced or allowed to make decisions based on inadequate information. Providers of service are being censured for acts of omission as well as for those of commission.

C. Service to Teenagers

Although the transition from childhood to adulthood is not as abrupt as in many parts of the world, the American period of adolescence is becoming progressively shorter, and teenagers are making more decisions about their sexual and reproductive lives than in prior generations. Whether society is more permissive, and parents more lenient, or whether youngsters, like women, are demanding more of a choice in their destiny is a moot point. Its merits or faults will continue to be debated, but the fact remains that younger teenagers are demanding an identity by any means necessary, and when that identity relates to matters sexual, their vulnerability increases. Thirty-five percent of abortions in California are performed on teenagers. Sexually active teenagers do not have access to family planning services, as do their older brother and sisters, and they are less informed about venereal disease. They are therefore more likely to make decisions without considering the consequences.

Fortunately, there are increasing numbers of able and willing people who recognize the necessity to deal with these youngsters in a non-judgementive manner, and to get them to thinking of self-esteem, responsible decision making, respect and concern for their partners and other meaningful approaches to inter-personal relationships. Rather than proscribe teenage sex, emphasis at all levels of society seems to be more directed toward prevention of unwanted pregnancy and lowering the incidence of venereal disease. Many are the statistics which indicate that all the positive parameters of maternal, infant and child health are jeopardized when people too young are faced with pregnancies, wanted or unwanted. Peer counseling, peer talk-groups known as rap sessions, better intrafamily communication, accurate health and hygiene information and treating the teenager with dignity and respect are helping to slow the increase of unwanted pregnancies, venereal disease and their sequelae.

D. Increased Federal Funds

Although there are about 3500 federally financed family planning clinics across the nation, in fiscal year 1974 there were still 35 percent of low-income women who did not receive needed family planning care from organized programs or private physicians. This represents about four million women. The Congress of the United States, within the past three months in one of the few overrides of a Presidential veto, assured the allocation of 171 million dollars to family planning projects, training, information and education, and population research for the fiscal year 1976 and 182.5 million dollars for fiscal year 1977. These figures are against 149 million dollars for fiscal year 1975. This legislation strives to make family planning services available to all persons, with priority being given to persons from low-income families, and it prohibits charges to those persons. Projects must offer a broad range of acceptable services including natural family planning methods.

E. Legislation

Many pieces of State and Federal legislation have been enacted to make family planning services and supplies more available to people who want them. Family planning services are advertised in all the public media, usually at no expense to the agency providing the service. Most radio and television stations allocate a portion of their time to public service, and not infrequently, they publicize family planning clinics and the broad range of services they offer. The desirability of child sparing, and smaller family size, are often the subject of television documentaries and written articles. In areas where a significant proportion of the population speaks a language other than English, such information is offered in that language, and persons of that ethnic background and culture are used as health educators and health care providers. Display of over-the-counter contraceptive supplies are permitted and encouraged. Condoms are no longer sold for the prevention of venereal disease only. Any place of business can be required to supply condoms for sale if sufficient requests are made. In California, minors over the age of 12, if sexually active and emotionally mature, may get family planning services and supplies. No parental consent is needed. Only oral contraceptives require a prescription.

F. Paraprofessionals

It has long been held that women are more sensitive to the needs, anxieties, fears and frustrations of other women than are men, and in no field is this probably more true than in Obstetrics and Gynecology, of which family planning is a component. Women are trusting of other women, and more comfortable with them, and probably rightly so, when it comes to pelvic examinations, if for no other reasons than the smaller size of the female hand. But even more important is the fact that most women practitioners have themselves been on the receiving end of a speculum and bimanual examination. I have had the experience of being unable

to examine an adult virgin with an undiagnosed vaginal discharge, and even having her faint from the anxiety and embarrassment of being unable to relax sufficiently to enable insertion of a virginal vaginal speculum. The next day she triumphantly informed me that one of our nurse practitioners did a speculum and a bimanual exam, a Pap smear, and obtained vaginal secretions for study, and "it didn't hurt a bit". Physicians, both male and female, tend to get rushed, complacent, and even cynical about something we think is so natural, but which is often undignified and embarrassing to a patient. A woman in the lithotomy positions, being examined by a man often invisibly seated at the foot of the table doing mysterious things and not communicating, must feel rather vulnerable. Feminine extremists propose that all future Obstetrician-Gynecologists should be women, but I have heard many more moderate women proclaim that their desire was for a sensitive examiner, male or female.

In Berkeley, California, we have been utilizing in a unique fashion, several women who are probably the equivalent of health aides elsewhere. These women were formerly community health workers, but after six months intensive training in anatomy, physiology and endocrinology of the female, they have learned to recognize, if not diagnose, the abnormal, and have achieved the status and title of Womens Health Care Specialists. They and the nurse practitioners are a valuable adjunct to any family planning clinic. The day is rapidly approaching when the physician can function as a consultant for problem cases only, leaving most of the family planning clients care to nurses and other practitioners who have the patience and the humility to be "concerned sisters".

G. Expanded Services

A significant percentage of child bearing-age women use their Obstetrician-Gynecologist as their primary care physician. They are usually in good health and see the family planning provider for an annual Pap smear which they have been taught is

essential to women on oral contraceptives. An annual Pap smear and pelvic exam are a prerequisite to a prescription for a 12-month supply of oral contraceptives. Since these visits are likely the only time the client visits a clinic or doctor's office, it behooves the practitioner to perform as many health maintenance tests and examinations as possible. To this end, venereal disease testing, pregnancy testing when indicated, hemoglobin and hematocrit, sickle cell screening when indicated, tuberculosis skin testing, urinalysis, blood pressure, breast examinations and instructions in self breast exam, nutritional counseling, infertility evaluation and referral to appropriate clinics are considered part of comprehensive family planning and/or comprehensive health care. Increasing emphasis is being placed on helping barren couples achieve parenthood, and several centers now offer infertility work-up as part of their services. The provider who does not utilize these return family planning visits, or the annual Pap smear visits, to give expanded health services is avoiding a responsibility to provide quality health care. Women are becoming sophisticated to the point that they expect and will often seek out this comprehensive type service.

H. Male Participation

There is growing evidence that men are willing to assume a responsible role in family planning programs. Their attendance with their partners at family planning clinics always increases when they are made to feel welcome, and invited to become involved in the patient education process. They are willing participants in rap sessions and their questions asked of discussion leaders and peers indicate a keen awareness and willingness to learn. Many are regular users of condoms, particularly if for medical or other reasons their partners are unable to use other contraceptives. Men are being taught to feel for the IUD strings of their partners who have an aversion to touching their own genitals. They are also being taught to help with insertion of diaphragms and vaginal spermicidal agents as part of the foreplay experience. The number of reported vasectomies

performed in the United States have increased from 300,000 in 1970 to 600,000 in 1975. Although many operators are reluctant to comply, some men who have never fathered a child request vasectomy as their commitment to population stabilization. Many couples find their lives sufficiently rewarding so that children are not desired. Other couples prefer adoption. The couple childless by choice is no longer the object of consternation or ridicule or pity. Men concerned about their partners often accept the less dangerous vasectomy rather than allow the female to submit to a more dangerous and costly tubal sterilization. Vasectomies are performed on an out-patient basis and cost 100 to 150 dollars whereas tubal sterilization costs about 700 dollars.

II. CONTRACEPTIVE MODALITIES

A. Abstinence

Abstinent clients do, contrary to public opinion, visit family planning clinics. They do so to avail themselves of the non-contraceptive medical services offered. Their abstinence may be involuntary due to illness, incarceration or travel of their partner, or it may be voluntary, or they may have a homosexual life style. Whatever the reasons, they should not be denied the needed non-contraceptive services, and although some clinics may not be reimbursed for these services, such clients should be either served, or referred to other sources of care. It is imperative that services be rendered in a non-judgementive atmosphere, and with dignity. There is no indication that abstinence, either temporary or prolonged, is harmful to one's health nor does it decrease fertility. When counseling teenagers especially, abstinence should be offered as a method of contraception because many youngsters are merely curious, have no intention of engaging in sex, but may in fact, be tempted to live up to the expectations of the counselor who unthinkingly offers a contraceptive modality.

B. Hysterectomy and Female Sterilization

Hysterectomy is often offered to the multipara who has completed her family, and who has real or potential uterine pathology. These procedures are often done by the vaginal approach so that concurrent anterior and posterior vaginal repairs can be performed to enhance pelvic comfort, increase sexual enjoyment and alleviate urinary tract problems. Removal of the site of the second most common female cancer is also achieved. Other types of female sterilization include laparotomy, laparoscopy and culdoscopy, the latter two of which entail shorter hospital stays and usually less morbidity. Special training and instruments are needed for these latter two procedures, and they should not be attempted by the inexperienced. All female sterilization should be considered permanent and irreversible and therefore pre-operative counseling, to ensure patients informed consent, is mandatory. Whenever possible, couples should be counseled and should mutually consent to the procedure, but the law allows any mature and rational women to submit to sterilization without spousal or partner consent.

C. Vasectomy

Vasectomy is an inexpensive, easily performed, non-disabling method of male sterilization which is increasing in popularity. Much unfavorable publicity about its association with the development of systemic disease is unfounded. Although a good percentage (50 to 90) of vas deferens can be reanastomosed successfully and patency re-established, sperm antibodies resulting from sudden reabsorption of large quantities of sperm produced after vasectomy, may render the sperm incapable of fertilization. It is therefore prudent to consider this male method also permanent because of hypofertility even after successful reanastomosis. There is no current evidence of this antibody formation resulting in increased susceptibility to systemic disease. Some men have elected to have sperm specimens quick-frozen and stored prior to their vasectomy, but there is no guarantee of fertility or perfection of the thawed specimens. It is important to note

that the vas deferens, proximal to the surgical site in the scrotum, contains potent sperm and several ejaculations are necessary before sterility after vasectomy is assured. As in the case of female sterilization, it is prudent to counsel the couple, but a male can elect to be sterilized without spousal or partner consent. Combined male and female sterilization in the U.S. account for over seven million couples who rely on this form of contraception.

D. Oral Contraceptives

Oral contraceptives represent the family planning modality used by approximately 11 million women throughout the world. They are the most reliable non-surgical method of contraception yet devised, and their failure rate when properly taken is close to zero. Most pills, of which about 28 varieties are currently available in the U.S., are composed of synthetic estrogens and progestins, similar in action to natural hormones. If pills are not tailored to a particular woman, either by prescription depending on a woman's apparent hormonal profile, or by trial and error methods, bothersome side effects are likely to result. These can usually be offset by juggling one or the other hormone component up or downward. A good rule of thumb is to use the lowest possible effective dose. There are statistically sound studies to indicate an association between oral contraceptives and thromboembolic diseases. It is not always possible to predict pill side effects and the U.S. Food and Drug Administration has recommended that 50 micrograms or less of estrogen be prescribed whenever possible.

The combination pills contain one of two types of estrogen, which is the hormone responsible for the danger associated with thromboembolic accidents, and a progestin, of which there are several types of varying potency, and which produce less dangerous side effects. The mode of action of combined hormone oral contraceptives is that of inhibiting ovulation by their suppression of hypothalamic hormones. Of the two components, estrogen and progestin, the

latter is more important in contraception. This is evident by the fact that about 1.5 percent of the women taking sequential pills become pregnant. However, when 0.5 to 2.5 milligrams of progestin are added to the estrogen from the start, fewer than 0.1 percent of exposed women become pregnant. When progestin alone in much smaller doses than that used in combined or sequential pills is prescribed on a continuous basis, (the mini-pill), about 2.5 percent of the women exposed become pregnant. Progestin alone alters the cervical mucus so that it becomes hostile to sperm. Either hormone may alter the endometrium or the tubal functions so that implantation of the fertilized ovum cannot take place. Variations in tissue sensitivity and serum levels of hormones in non-contracepting women are unpredictable, and it is this fact which explains the unpredictable side effects from either hormone component of pills at varying times of the month, and from month-to-month.

Thromboembolic phenomena are absolute contraindications to oral contraceptives. The less serious side effects such as breast symptoms, headache, spotting or break-through bleeding, weight gain, amenorrhea and post pill amenorrhea can frequently be managed by pill changes. The near physiologic dose of oral contraceptive components make them unlikely carcinogenic agents but they can enhance already existing hormone dependant carcinogenic agents but they can enhance already existing hormone dependant cancers. Hypertension dictates judicious administration of oral contraceptives, and women near 40 years of age should be considered at increased risk of coronary heart disease. Impaired liver function, thrombophlebitis, undiagnosed genital bleeding, and current or past cerebral apoplexy are also absolute contraindications to oral contraceptives. Relative contraindications include epilepsy, diabetes, uterine myomata, depression, asthma, and varicosities. One must always consider the alternative to oral contraception, and if the alternative is pregnancy, the very hormone increase which we would hope to avoid is reproduced many-fold. In other words, when we discuss risks, they must be "compared to what?"

E. Intrauterine Device

Variations of the intrauterine device have been utilized for several decades and rumor reports that Arab camel drivers of several centuries ago employing this method of contraception on their female beasts of burden. It might be wise to enumerate the devices which for varying reasons have fallen into disrepute. These include the Mazjlin Spring, the Ota Ring and the Birnberg Bow, the latter two of which are closed devices which, if associated with perforation, pose the threat of bowel incarceration. The Mazjlin Spring is very difficult to remove and often causes endometrial complications. The Dalkon Shield, temporarily popular, has a tail which is multi-filamented and absorbs vaginal contaminants which cause endometritis and potentially infected pregnancies resulting in dangerous and often fatal mid-trimester abortions. Currently the only approved intrauterine devices are the Saf-T-Coil, the Lippes Loop, and the Copper and progesterone bearing devices. The copper bearing IUD's allow a smaller device to be used, since the surface area of the device is reportedly directly proportional to its effectiveness. Copper, by its slow ionization, is thought to interfere with the enzymatic reactions of the endometrium and thus help prevent implantation. Although reports of their effectiveness were very encouraging, the tests of time and wide usage seem to be tarnishing their brilliance. They are less effective than previously thought and may be no better than the other non-copper bearing devices. It is also necessary to replace the current ones every two years because of depletion of copper. The progesterone bearing IUD's work on a principle similar to that of other depo progestins, but they must be replaced yearly. Studies are still underway.

Over 15 million women in the world, 4 million in the U.S., use the IUD method of contraception which results in two to five pregnancies per hundred women years of exposure. There is an increased risk of extrauterine pregnancy when they do fail. Their positive features lie in the

fact that they require only one-time motivation, and call for an additional motivational effort to effect their removal. Their continuation rates in developing countries and certain segments of the U.S. populations indicate a performance superior to that of other contraceptive modalities. Approximately 80 percent of the users will continue its use through the first year and this figure increases over subsequent years. This is in contrast to oral contraceptive users whose continuation rate is much less (50-60 percent the first year).

About 50 percent of the women who become pregnant with IUD's in place will abort. Fifty percent will have an unaffected term pregnancy. If the IUD is removed when pregnancy is apparent (provided the string is visible), the woman is less likely to abort. Uterine abnormalities, pelvic infections, heavy menstrual flow and small uterine size are contraindications to IUD usage.

F. Intramuscular Progestin

Intra-muscular progesterone offers advantages that may be important in developing countries. The advantages are related to effectiveness, simplicity, duration of effect, independence from coitus, and nonsuppression of lactation. Because of the development of breast tumors in laboratory animals associated with its use, and the unresolved issue of its association with cancer in-situ of the cervix, the Food and Drug Administration has not approved it for contraceptive use in the United States. Its unpredictableness of reversibility also makes it more appropriate for women with completed families rather than those wishing to space children. Unpredictable uterine bleeding is also a side effect which theoretically precludes its use in Moslem communities, but I am informed that it is extremely popular in some North African countries. Weight gain and altered carbohydrate metabolism are other undesirable side effects, but again I ask, "compared to what?" when options are limited. Its use in the U.S. is confined to controlled contraceptive studies, and in the treatment of certain uterine cancers, notably endometrial carcinoma.

Intra-muscular progestin contraception is increasing in popularity throughout the world, and an estimated 1 million women now use it. Its mode of action is primarily by inhibiting ovulation, but also by increasing the viscosity of cervical mucus rendering it more hostile to sperm, and by making the endometrium less suitable for implantation. Its effectiveness is considered high, there being less than one pregnancy per hundred women years of use in most reported series. Progesterone implants are presumed to have the same mode of action and effects as intra-muscular contraceptives, with one possible advantage being a longer interval between treatments, but the disadvantages are similar and there are several studies yet to be reported. The unpredictable bleeding associated with depot progestins can be controlled with cyclic low dose estrogen administration, but this requires motivation equal to that of oral contraceptive users.

G. Condoms

Condoms with and without spermicidal agents are a highly effective contraceptive, and give the added advantage of protection against venereal disease. They are relatively inexpensive, manufactured under conditions of strict quality control, which almost completely eliminates the possibility of a defective product, and are easily obtainable. It is one of the few male oriented methods of contraception which some countries, notably Japan, are doing a remarkable job of promoting. The Japanese product is thinner, just as strong, is manufactured in different colors and patterns, and often marketed with male and female undergarments which have colors and patterns identical to those on the condoms. Much emphasis is also put on having the female place the condom as part of the foreplay. Condoms are manufactured with reservoir tips and with varying types of lubrication. More expensive ones are made from substances other than rubber or latex. When condom use is associated with female use of a contraceptive foam, protection against pregnancy approaches that of the intrauterine and oral contraceptives.

The disadvantages of condoms are their cost, particularly in developing countries, and their non-reusability, although there are reports of condoms being reused. The esthetics and safety involved with reuse are questionable. In the U.S. condoms are readily available and inexpensive, and reuse is unnecessary.

Condoms must be used properly with space for semen left at the tip, they must be placed before coitus begins, and the penis must be withdrawn from the vagina soon after ejaculation; holding the condom so as to prevent loss of semen. Male motivation is always a problem with this method, as some men complain of interference with sensitivity and prefer to use the condom for only the part of the sexual act prior to ejaculation. This is obviously fraught with danger.

H. Diaphragms

The diaphragm, with a spermicidal cream or jelly, is an effective contraceptive method which when properly used will result in about five pregnancies per hundred woman years of exposure. Its successful use requires a highly motivated woman with no hesitancy about touching her genitals. More and more American women, disturbed about increasing reports of pill and IUD complications, are returning to the use of the diaphragm. They do not want to alter their body physiology with "chemicals" nor do they want "foreign bodies" in their uteri. They are concerned, and possibly rightly so, about the long term effects of pills and IUD's on themselves and their offspring. Needless to say, diaphragms which range in size from 55 to 100 millimeters in diameter must be fitted properly, and must always be used with a spermicidal cream or jelly, but not with foam which is too dispersible to be effective. The diaphragm's effectiveness depends upon the spermicidal agent being concentrated in its cup so as to prevent sperm from entering the cervix without passing thru it. The diaphragm also offers some protection against the transmission of venereal

disease. It should not be in place for more than two hours before use without adding more contraceptive cream or jelly. The patient must be sure the diaphragm is placed correctly by feeling that the cervix is covered. Subsequent coital acts in the same setting should be preceded by insertion of another applicator full of jelly or cream. The diaphragm should be left in place for 6 to 8 hours after sex. In the woman superior position of coitus there is increased risk of the diaphragm being dislodged.

The contraindications to diaphragm use include uterine prolapse and other marked displacements of the uterus, vaginal fistulas and large dystoceles.

I. Coitus Interruptus

Coitus interruptus is still the most widely practiced method of contraception in the world today. It costs nothing, but requires a tremendous level of self control. Although it is referred to as the French method in some quarters, most Western men do not have the motivation necessary to practice such self control. Men in some parts of Asia are proficient in this method, but are said to be so because of extreme poverty which precludes the use of any method which costs even a pittance. The disadvantage of coitus interruptus is that secretions of Cowpers glands often contain sperm and can escape unknowingly prior to withdrawal. It must be considered an unphysiologic method since the urge in most men is to penetrate deeper at the time of ejaculation. With highly motivated men experienced in the method, failure rate is 15 to 20 pregnancies per hundred women years of exposure.

J. Rhythm

Rhythm, which entails periodic abstinence, is the only method of contraception acceptable to the Roman Catholic Church. There is ample evidence that many otherwise devout Catholics use other more effective methods, and many Church officials regard it as an untenable option. Rhythm, to be effective, requires careful attention to dates,

and ideally requires menstrual cycles fairly consistent in length. To determine the time of ovulation requires religious taking and charting of the basal temperature through several cycles. If the day of ovulation can be fairly precisely demonstrated, avoidance of coitus several days prior to and after ovulation may be successful. To be precise, the longest and shortest cycles over a period of a year need to be determined. Subtracting 18 days from the earliest and 11 days from the latest likely day of menstration will give the dates between which sex is proscribed. Even in consistent 28 day cycles, an eight day period of abstinence is required. Greater variations of cycle length may require up to 12 or even 18 days of abstinence per month. If we subtract an average of four to five days menstrual flow, it is apparent that there are few days left in the month to enjoy sex without fear. Statistics indicate that once Catholic families reach their desired size, fewer than 20 percent rely on rhythm for contraception. Astrological and other methods of rhythm are practised with varying results.

K. Lactation

Because the amenorrheic post partum period of lactation is associated with suppressed ovulation, and thus fertility, prolonged breast feeding offers some protection against pregnancy. Exclusive breast feeding may provide some protection for up to 12 or 15 months, but not so if breast feeding is supplemented which, ideally, it should be. Menstruation is usually also delayed, but ovulation can and usually does return before menstration. Ironically, the most effective method of contraception, the pill, suppresses lactation to varying degrees. The life style of most American women precludes prolonged breast feeding.

L. Prayer and Hope

Unfortunately, prayer and hope are not reliable methods, but are mentioned to be discouraged. It is surprising, however, to note the number of women who just thought "it wouldn't happen to me". This method is often referred to as ovarian roulette, and there is a reported failure rate of at least 80 pregnancies per hundred woman years of exposure.

III. ABORTION

Since 1973 and the historic U.S. Supreme Court decision which stated in effect that abortion in the first trimester of pregnancy was a matter of concern only to the woman involved and her physician, and that in the second trimester of pregnancy, abortion could be regulated by the State to protect the mothers health (but not prohibited), the numbers of legal abortions have increased to over 900,000 performed in 1974. Surprisingly, a few illegal abortions persist, but not approaching in numbers the nearly 1 million illegal operations estimated performed annually prior to 1967 when abortions were liberalized in a few states. The only operative procedure performed in greater numbers than abortions is tonsillectomy, with about one million being performed yearly.

A. Preemptive Abortion

All public information, patient education, medical practice and legal constraints encourage the patient to seek early abortion, since statistics show that first trimester abortions are associated with only one-third the complications seen with abortions of 13 weeks or more. Generally speaking, the incidence of complications, even in the first trimester are directly proportional to the length of gestation. There is, however, a procedure known as pre-emptive abortion or menstrual induction which was temporarily very popular, but seems now to have lost some of its glamour. This procedure involves removal (usually by aspiration) of the contents of a uterus after a missed menstrual period, but before pregnancy is definitely diagnosed. The most readily available and easy to perform, relatively inexpensive pregnancy test, is an agglutination inhibition test which detects chorionic gonadotropin in the urine or serum beginning at about 44 days following the last menstrual period. Although there are radio-immune assay tests which can detect pregnancy within a few days of fertilization, they are as yet expensive and not widely available. Therefore, there is a 40 to 50 percent chance, according to a large series reports, that the woman will not in fact prove to be pregnant in cases of pre-emptive abortion without laboratory confirmation of pregnancy. Opponents of this procedure cite the high percentage of unnecessary operations and the greater chance of missing an early nidation site, thus necessitating a second procedure.

B. First Trimester

First trimester abortions, 85 percent of which are now done by vacuum aspiration, are considered a relatively easy and non-traumatic procedure to perform. Large numbers are performed in free standing clinics, which have ready access to hospitals in the event of complications, and in private physicians offices. The procedure should be preceded by a limited physical examination, including a pelvic to confirm the positive pregnancy test and to rule out associated pelvic pathology. Hemoglobin and Rh typing and venereal disease testing (gonorrhea culture) should also be done. If a woman proves to be Rh negative and has no antibodies, the administration of Rhogam (Rh immune globulin) prevents the development of these antibodies which could endanger a subsequent fetus.

First trimester abortions can be done under local anesthesia with rare exceptions, and an experienced operator can perform 20 to 30 procedures daily without losing finesse. The cost ranges from 150 to 200 dollars in a free standing facility or doctors office, to 450 dollars if hospitalization and general anesthesia are used. First trimester abortion complications rates are three to seven percent total depending on the series reported, with 0.3 to 1 percent being major complications. The rate of complications in both major and minor categories is approximately trebled for second trimester abortions. Deaths per 100,000 cases for first trimester abortions are less than two, for the second trimester abortions about 12, for child birth about 14, for hysterectomy about 200 and for appendectomy about 350.

C. Second Trimester

Second trimester abortions are best performed after the 15th week of pregnancy when the amniotic sac is large enough to permit a successful trans-abdominal tap. This means that there is a gray zone between 12 and 16 weeks when no uniformly successful method is reported. Some amniocentises are performed to determine the presence of genetic defects in the unborn fetus, and the cell cultures associated with the procedure often take four to six weeks to perform, so in these instances

amniocentesis is often attempted at 14 to 15 weeks. This gives time to perform abortions by the twenty-second week if genetic studies so indicate. Most states permit abortion till the twenty-second week and New York till the twenty-fourth week.

Abortion is facilitated by the intra-amniotic instillation of hypertonic saline, glucose, urea or prostaglandin. Each of these substances is not without danger and side effects, and operators tend to favor the substance with which they have the most experience. Most centers start an intravenous drip of dilute oxytocin several hours after amniocentesis in order to shorten the time between injection and abortion. 95 percent of women abort within 24 hours, and the placenta is removed if not expelled spontaneously within two hours after the fetus. Fetal death usually precedes abortion, but is less likely in very late procedures and if prostaglandin is used. Uncomplicated second trimester abortions cost 450 to 550 dollars.

All of the unfavorable sequelae of unwanted pregnancies as they relate to maternal and child health - maternal mortality and morbidity, neonatal mortality and morbidity, prematurity, child abuse, child abandonment, failure to thrive, mental retardation and childhood under-achievement - have shown dramatic decreases since legalization of abortion. Obviously there are moral and theological and humanitarian questions which are unanswered, and many learned people will continue to debate these issues for years to come, but a frequent argument of pro-abortionists is that there is no abrogation of human rights unless abortions are performed without informed consent, or are forced upon any segment of the population.

IV. FOR THE FUTURE

Newer methods of contraception under investigation include the development of immunizing agents against conception, drugs for inhibition of spermatogenesis in the male, removable silastic occlusions for the fallopian tubes and vas deferens, and a smorgasbord collection of drugs with predictable antifertilization and anti-implantation characteristics which are reversible, and have no harmful side effects.

Since it seems that an effective male method is many years in the future, and since there are many more points of intervention in the female anatomy and physiology, the bulk of investigative procedures are female oriented. In this regard, I offer the plea that women have a stronger voice in determining what is acceptable and advisable in relation to fertility control.