Current Medical Research

Hanna Klaus, M.D.

Natural Family Planning

Diocesan Activity Report

SUPPLEMENT

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Roman Catholic Church-sponsored natural family planning services in the United States. R.T. Kambic and T. Notare. *Advances in Contraception* June 1994: 10:2:85-92.

The results of five years of quarterly reporting of NFP programs to the Diocesan Development Program for Natural Family Planning are tabulated. Between 1988-1992, 78 dioceses ever reported while 96 never reported. The majority of clients used NFP to avoid pregnancy and received follow-up. Using least square regression, the level of service of programs which never reported was estimated. An average of 18,000 women were taught annually in the reporting period. Half the clients were referred by Church sources, 20% by other NFP sources. Using linear regression data, the authors calculated low, average, and high estimates for rural and urban programs which never reported. A combination of reported and estimated data shows a ratio of 1:5 for rural vs. urban clients. Among those programs never reporting were several large diocesan NFP programs. The reasons for their lack of participation varied from lack of interest in the project to budget restrictions. This study concerned itself with NFP services operating under the aegis of the local Church. No attempt was made to estimate the number of clients taught by private providers.

In 1982, Mosher estimated that there were 1,166,000 periodic abstinence users in the US. This number decreased by 31% to 860,000 by 1988, a loss of about 60,000 users per year. The authors suggest that as women age, they leave the NFP users group and are not replaced by younger women in similar numbers - only 18,000 new clients per year. Clearly the good news about NFP is not getting out and many persons are actively discouraged from seeking it out by uninformed or biased providers; yet there are nearly 1 million satisfied users in this country. Among the authors' conclusions: more resources need to be developed for program promotion and dissemination.

*[Readers are reminded of the as yet unpublished Reinterview data of the National Survey of Family Growth, conducted in 1990 which shows that currently 59.2% of women of reproductive age use any method of family planning. Of these, 2.3% use calendar rhythm and 0.37% cervical mucus and/or temperature. A survey conducted by Mark Clements Research for Parade (see, "Sex in America Today." Parade Magazine, August 7, 1994) found that among 1,490 men and women aged 18-65 — a representative sample — 8 out of 10 persons found it difficult to have sex without emotional involvement. Thirty percent (30%) of respondents rely on condoms; 23% use the pill; 16% have been sterilized; 12% have partners who have been sterilized; and 5% **say they practice Natural Family Planning - the "rhythm method."** If this survey is reliable, the number of NFP users has doubled since 1990.*

For your information, the Parade survey also found that: Married people had far higher sexual satisfaction than single. Higher rate of condom use and a lower rate for extra-marital affairs were reported, but no figures were given. Three percent (3%) of male respondents identified themselves as homosexual and 1% of women, while 3% of men and 0.4% of women say they are bisexual. Average monthly coital frequency was cited as:

Age	Coital Frequency
18-24	8
25-34	9
35-44	8
44-55	7
55-67	5

Twenty percent (20%) of women who were surveyed also said they would use RU486 if it were available; 35% said they would not; 32% were not aware of it; others did not respond. Ed.]

Trial of a new method of natural family planning in Liberia. R.T. Kambic, C.A. Lanctot, and R. Wesley. *Advances in Contraception* June 1994: 10:2:111-119.

The modified mucus method of NFP devised by Dr. Kathleen Dorairaj of New Delhi underwent a field trial in Liberia. The modified mucus method was devised for poor and illiterate women who do not chart, but only remember their mucus patterns. They were compared with acceptors of the sympto-thermal and ovulation methods.

Because the modified method was offered to educated rather than illiterate women, the outcomes are in question. Unplanned pregnancy rates were: MMM - 6.6; ST/OM - 1.5. Discontinuation rate: MMM - 7.3/100 per year; ST/OM - 3.2. Overall discontinuation rates by MMM users - 44/100 women per year. Cost per couple year protection (CYP) for MMM was $55.80, and $56.10 for STM/OM. *[Clearly this reflects initial start-up and operations research costs for both methods. Autonomous clients continue at no cost. Ed.]*

The Lactational Amenorrhea Method (LAM): A postpartum introductory family planning method with policy and program implications. M.H. Labbok et al. *Advances in Contraception* June 1994:10:2:93-109.

Breastfeeding not only contributes importantly to child survival and child nutrition, but is probably responsible for more successful birth spacing then all family planning methods in current use. The Bellagio consensus has been born out by additional studies: if a woman breastfeeds totally, and has not yet experienced a return of menses by the time the child is six months old, she can expect less than 2% unplanned pregnancies. But neither demographers nor family planning organizations have yet averted to the value of LAM. If the nursing mother fits the above algorithm she is counselled that her risk of pregnancy is less than 2% and she does not need a complementary method yet, but will if the three previous conditions are not met.

Frequency and intensity of suckling changes the neuroendocrine cascade mediated by the level and rhythm of release of gonadotropin releasing hormone (GnRH). This in turn changes the pulsatile secretion of prolactin (PRL) and the gonadotropic hormones FSH and LH. This leads to decreased and disorganized follicular development. While suckling continues, there is also paradoxical negative feedback. If estrogen rises, there is increased suppression of LH and FSH instead of the peaks or more frequent pulsing of LH and FSH which are seen in response to the estrogen rise during the menstrual cycle of non-lactating women. As a result, intensively lactating women are more likely to have a delay in the return of menses and their first bleed will most likely be anovulatory. A return to bleeding is a herald of increased fertility. *[The authors use the term "menses" for any bleed, whether anovulatory or post-ovulatory. Ed.]* Less than full breastfeeding is associated with gradual increase in the occurrence of ovulation before menses. The risk of ovulation doubles when the percentage of breastfeeds is reduced from 100% to 75% or from 75% to 50%. The risk of pregnancy is considerably lower if the woman breastfeeds exclusively for more than 10 feeds/day. Continuing a high day and night frequency will prolong infertility. The risk of ovulation increases gradually over the postpartum months. There is no certain shift exactly at 6 months. The 6 months' point was selected based on increasing risk of ovulation over time and specifically because weaning would usually commence at this time.

The paper reports a clinical trial from Santiago, as well as freestanding family planning delivery sites in Ecuador, Guatemala, and Honduras which currently extend LAM to 9 months for self-selected women who continued to breastfeed and were amenorrheic. They found no pregnancies among 419 acceptors. A 12-month trial is now being considered. A world-wide 10-12 multicenter LAM trial has begun, which should shed further light on the issues.

Current objections to LAM found in the literature are: 1) malnutrition of women, *[A specious argument since these women must rely on breastfeeding if their children are to survive. Ed.]* Providing nutritional supplements to mothers may have improved maternal health, but had a negligible impact on return of fertility. 2) Duration of breastfeeding: few women exclusively breastfeed for 6 months, but with sufficient support, many more women could. The Chilean program raised acceptors to 60%; exclusive breastfeeding is not demanded. 3) Women need to leave the home to work; however frequent expression of milk by the working mother can elicit a hormonal response similar to suckling. Institutional opposition has ranged from an unwillingness to abandon current and comfortable practices, to doubting a woman's ability to change, or a failure to adopt a complementary method. *[A number of family planning programs offer LAM, but do not suggest natural methods as the complementary method. It is hoped that education will change this. Other studies previously reported here have found a return to fertility as early as 12 weeks despite full nursing, hence observing for signs of fertility is still prudent. Ed.]*

Young Adults, Alcohol and Condom Use: What Is the Connection? J.H. Senf and C.Q. Price. *Journal of Adolescent Health* July 1994:15:238-244.

Ten studies of the relationship between alcohol and condom use showed variable relationships. Hence a questionnaire about alcohol use and the use of condoms, at last intercourse, was administered to three different groups: 1,287 university undergraduates, a convenience sample of 369 students in technical and community colleges, and a random sample of 172 attendees at a street fair. None of the three groups showed that alcohol use related to a decreased use of condoms. The use of condoms is not dependent upon sobriety of young adults. The authors do not offer any explanation for this finding, but suggest that it needs to be researched.

Gender Differences in Rural Adolescent Drinking Patterns. S.K. Pope, et al. *Journal of Adolescent Health* July 1994:15:359-365.

An anonymous written survey administered to 2,297 rural adolescents aged 12-18 years, in a rural Mississippi river delta county, attempted to identify potential risk factors for problem drinking behavior. Demographic, behavioral, peer, and parental characteristics were examined and compared with drinking patterns for male and female adolescent drinkers. Males were more likely than females to report all of the behavioral and peer risk factors associated with problem drinking except depressive symptoms, which were more frequently reported by

females than males. Females were more strongly influenced by peer disapproval of drinking. The ratio of male to female problem drinkers was 2:1. Demographic measures included gender, race, and age. Behavioral measures include: church attendance, academic achievement, parents' smoking behavior, and, as a measure of risk taking, use of seatbelts. Donovan and Jessor's HBQ scales were used to identify depressive symptoms. All of the risk factors were significant except parental drinking and parental drinking problems. Both male gender and peer approval correlated with significant drinking problems defined as having been drunk or very high on alcohol three or more times in the past six months, or as having reported negative consequences of drinking from at least two sources — parents, police, friends, dates, or at school.

The temporal sequence of the relationship between risk factors and problem drinking could not be determined because of the cross-sectional nature of the study, but alcohol abuse has been associated with depressive symptoms which usually precede the abuse in other studies. Females in this rural sample had more depressive symptoms than males, suggesting that alcohol may have been used to relieve depression.

Many studies are also hampered by a lack of quantitation of the drinker's weight and the amount of alcohol ingested. Women's bodies contain far more fat and less water per pound than men's and usually women weigh less than men. When alcohol is ingested, it is distributed in total body water. Therefore, an equivalent amount per pound will result in a higher blood alcohol level for women than for men. Women also show more variation in day to day peak blood alcohol levels, a variability which appears to be associated in part with menstrual cycle phases. On average, American women consume half as much alcohol as men (.44 oz vs. .91 oz per day). Ten times that amount is usually found among patients in treatment programs.

Studies have shown males to be more aggressive. They have more behavior problems at school, and have more externalizing behaviors in general than females regardless of drinking status. But females have a much higher level of depression. Females drink to get drunk, while males often drink in ways that are rebellious or acting out in response to stress and tension in the home environment. Females tend to respond to stress with self-blame, leading to shame and guilt. They may also engage in unintended sexual behavior because of alcohol which can lead to more guilt and depression. Females frequently use drinking as a way of dealing with stressful events or painful emotions. Alcohol leads them into further social isolation. *[Unfortunately, this study did not inquire about sexual behavior nor contraceptive use. It is known that one-third of women on the oral contraceptive test at the depressive end of the Beck Depression Inventory. In the absence of data, one can only speculate whether alcohol was resorted to in part because of chemically induced depression. Ed.]*

The Changing Pattern of Multiple Births in the United States: Maternal and Infant Characteristics, 1973 and 1990. B. Luke. *Obstetrics & Gynecology* July 1994: 84:1:101-106.

Vital statistics data were used to analyze live births from 1960-1990 in order to assess the changes in the occurrence and outcome of live births between 1973 and 1990. From 1960-1973, the number of twin births paralleled that of singletons, while the number of triplet+ births remained fairly constant. Between 1973-1990, the occurrence of twins changed from 1:55 to 1:43 and for triplets from 1:3323 to 1:1341. Preterm births accounted for 9.7% of singleton births, 47.9% of twin births, and 87.8% of triplet+ births. Along with the greater frequency of multiple gestations, very low and low birth weight infants numbered 24.2% among twin births and 142.3% greater among triplet+ births, as compared with the 1973 ratio. As a result of the far greater percentage of high risk pregnancies and the increased risk of premature birth, obstetrical care is challenged to provide ever better preventative care and aggressive peri-natal care. *[Alternately, one could stop giving ovulation inducing drugs which are the cause of many multiple gestations. This would entail not delaying childbirth to the age when fertility naturally declines, as well as reducing the number of years women age their cervices with contraceptive steroids. Ed.]*

Emergency Contraception: A review. A.A. Haspels. *Contraception* August 1994: 50:101-108.

Post-coital contraception was developed in the 1960s by Morris and Van Wagenen in the USA with diethylstibestrol, and in the Netherlands by Haspels with ethinylestradiol. When the estrogens are taken prior to implantation, implantation is prevented, but a high dose of estrogen does not interfere with the progress of pregnancy after implantation. Later the Yuspe regime of combination birth control pills was adopted. If the woman presented more than 72 hours, but less than 7 days after intercourse, insertion of an IUD was proposed by Lippes. This could be

Questions?

Do you need further information regarding research reported in this Supplement? Have you a specific question which you'd like to ask the Editor? Please direct your letter to the Editor, ***Current Medical Research,*** *DDP/NFP, 3211 Fourth St., N.E., Washington, D.C. 20017. We look forward to hearing from you.*

continued for those who prefer the IUD as an ongoing method of contraception when estrogens were contraindicated. However, IUD users have a 7x higher risk for development of pelvic inflammatory disease than non-IUD users; hence, its use in nulliparous women must be considered very carefully. The IUD has been used as an interceptive agent, being most successful between day 21 and day 28 of the cycle. Haspels considers post-coital contraception to be an absolute necessity because sexarche, the age of first coitus, is occurring earlier resulting in earlier intercourse by adolescents who only rarely use effective methods of contraception when they begin sexual experimentation. He notes that in the Netherlands, post-coital contraception is used so commonly that the incidence of induced abortion is "only 18,000/180,000 births." Teen pregnancy is 14/1000 compared to 45/1000 in England. He attributes this low incidence to an enlightened attitude towards sex which is more prevalent in the West. [*Evidently Haspels does not count pregnancies before implantation. See Letter to ACOG, below. Ed.*]

Irregular bleeding, body mass index and coital frequency in Norplant contraceptive users. S.A. Pasquale, et al. *Contraception* August 1994: 50:109-116.

Bleeding patterns and body mass index were evaluated in 75 women who requested Norplant. Thirty-two percent (32%) of users requested removal because of irregular bleeding, the majority during the first two years of the implant. Most women had regular menses after two years of implant use. Coital frequency was not altered, except among those for whom bleeding presented ethical or religious difficulties. Fifty-seven percent (57%) were married or "living with a significant other." The rest were single, divorced, or separated. There were no unplanned pregnancies. [*The Health Section of the Washington Post carries ads by law firms inviting clients who have been injured by Norplant. To date, at least 1,100 women have joined one class action suit. Many problems are associated with incompetent insertion or even less competent attempts at removals. Ed.*]

Breakage and slippage of condoms in family planning clients. M.J. Sparrow and K. Lavill. *Contraception* August 1994: 50:117-129.

The New Zealand Family Planning Association obtained information on condom use from 540 clients who used 3,754 condoms in one month. Breakage, slipping, leakage, or a combination of the above occurred in 410 (10.9%) of events involving 40.2% of the clients: breakage occurred in 5.6% and slippage in 6.5% of events. Leakage was usually associated with one or the other. Breakage was more common among younger and inexperienced clients and among those with a previous similar episode. Poor fitting and non-spermicidal condoms broke more often. Dryness, tearing with fingernails, vigorous sex, or using saliva to lubricate, increased breakage. Additional lubrication was not helpful, while oil-based lubricants produced fewer breaks than expected. In two-thirds of the episodes, clients were aware of the break before ejaculation occurred. The most common reason for slippage was that the condom had been left on for too long. The type of condom used was associated with breakage. The Durex brand from London Rubber Industries performed best while Lifestyle from Ansel International USA was least successful. Slippage was not associated with any particular brand. The authors compare their breakage rate of 5.6% with other studies which range from 0-12%. New condoms - 3.5% and 18.6% for 81-month old condoms. Breaks were lowest with wives and highest with girl friends. Breaks were also higher when partners did not live together. Oral and anal sex were associated with more breaks than vaginal intercourse. There is difference of opinion as to whether certain individuals are accident prone.

A Longitudinal Study of Human Immuno-deficiency Virus Transmission by Heterosexual Partners. I. de Vincenzi. *New England Journal of Medicine* August 11, 1994: 331:341-346.

A further analysis of the data set reported by de Vincenzi in the *British Journal of Medicine* (28 March 1992) studied longitudinal transmission by heterosexual partners. The previous paper had studied male to female transmission. While 304 HIV negative subjects were followed for an average of 20 months, only 256 couples continued to have sexual relations for more than 3 months after enrollment. Among these, 46% used condoms consistently for vaginal and anal intercourse and none of the seronegative partners became infected, while seroconversion among those who used condoms inconsistently was 4.8/100 person years. The risk of transmission increases with advanced stages of HIV infection in the index partner and with genital infection in the negative partners. Withdrawal before ejaculation into the vagina offered a protective effect to uninfected women.

Condoms and HIV Transmission. A.M. Johnson. Editorial from *New England Journal of Medicine*, August 11, 1994: 331:391-392.

This editorial concludes that male to female transmission is approximately twice as efficient as female to male transmission, but that consistent condom use offers some measure of protection. Additional modes of controlling transmission of disease are suggested, such as general STD controls, development of vaginal microbicides, the development of vaccines, as well as behavioral interventions. Experiments as well as evaluation of the latter are not yet available.

Parents' Expectations for Preadolescent Sons' Behavioral Autonomy: A Longitudinal Study of Correlates and Outcomes. S.S. Feldman & D.N. Wood. *Journal of Research on Adolescence* 1994: 4:45-70.

A longitudinal study looked at the nature and correlates of parents' expectations about their sons' behavioral autonomy during adolescence. Parents completed a teen timetable when their sons were in the 6th and again in the 10th grade. The timetable indicated when parents expected to grant privileges and require responsible behavior such as: studying without being reminded, being allowed to choose a hairstyle even if parents disapprove, attend boy/girl parties, choose reading materials, decide how to spend money, stay home rather than go with the family, and choose what clothes to buy. Fathers who expected to grant early privileges projected that their adolescent sons were to be under motivated and do less in school, while engaging in more social misconduct, than sons whose privileges were given later. Mothers' timetables were unrelated to their sons' mid-adolescent behavior. [*Clearly, fathers need to be present and authoritative - not authoritarian - in order to raise sons who are able to mature normally and take responsibility for their actions. Ed.*]

Aberrant Integrin Expression in the Endometrium of Women with Endometriosis. B.A. Lessey, et al. *Journal of Clinical Endocrinology and Metabolism* August 1994: 79:643-649.

The diagnosis of minimal or mild endometriosis in women with subfertility may be made easier by using a new marker. The $^{a}v\beta3$ vitronectin receptor is known to be present in endometrium at implantation and in normal secretory endometrium after day 19 of the cycle. Endometrial biopsies, obtained after day 19, of 241 women failed to find the ß3 subunit. These woman were subsequently proven to have minimal to mild endometriosis. This may prove clinically useful.

Improved Mineral Balance and Skeletal Metabolism in Postmenopausal Women treated with Potassium Bicarbonate. A. Sebastian, et al. *New England Journal of Medicine*, June 23, 1994; 330:1776-1781.

Many normal persons live with a low level of metabolic acidosis and positive acid balance which is produced by a diet which contains a high level of protein. Base is mobilized from the skeleton to counteract the retained acid. This was thought to contribute to the decrease in bone mass which normally accompanies aging. Potassium bicarbonate was administered to 18 women who had a constant diet of 96 grams of protein/60 kg body weight. The calcium and phosphorous balance became more positive and correlated with increases in serum osteocalcin and decrease in urinary hydroxyprolene excretion. Thus, "in postmenopausal women, the oral administration of potassium bicarbonate at a dose sufficient to neutralize endogenous acid, improves calcium and phosphorous balance, reduces bone resorption, and increases the rate of bone formation."

LETTERS TO THE EDITOR

July 18, 1994.

Dear Dr. Klaus,

In *Current Medical Research*, Vol. 5, No. 3, Summer 1994, you reported on the AVSC technical statement on the quinacrine method of female sterilization and added in an editorial note that "WHO is also funding quinacrine pellet insertion in Pakistan." This statement is incorrect. In fact, WHO has been attacked in a Lancet editorial for refusing to support clinical studies of this method until proper toxicological evaluation of intrauterine administered quinacrine has been completed satisfactorily. For your information I enclose a copy of the Lancet editorial attacking our position on quinacrine and our letter of reply.

P.F.A. Van Look, M.D., Ph.D.
Associate Director
Special Programme of Research,
Development and Research
Training in Human Reproduction
The World Health Organization

Reply to Dr. Van Look:

Dr. Altaf Bashir, Professor and Head, Department of Gynecology, Punjab Medical College, Faisalabad, Pakistan presented her paper on nonendoscopic surgical contraception, November 18, 1992 at the Meeting of the European Society of Hysteroscopy, First International Congress on Hysteroscopy, Endoscopic Surgery, and Reproduction, Islamabad, Pakistan. I (H.K.) co-chaired the Meeting. Dr. Bashir reported on more than 2,000 quinacrine non-surgical tubal occlusions between 1990-1991. The failure rate was 1.34% without any ectopic pregnancy. Dr. Bashir stated that she was working on a protocol from the World Health Organization, although other works she reported were sponsored by UNICEF. It is possible that the terms were confused. My apologies to Dr. Van Look and the World Health Organization.

H.K.

LETTERS TO THE EDITOR

A Lou Ann Eller wrote inquiring about the lack of editorial comment in the Spring 1994, Current Medical Research article by Chi which stated that IUDs are not abortifacients. Due to the length of Mrs. Eller's letter it is not published here. Rather, we provide you with only Dr. Klaus' response.

Two years ago I wrote a special editorial in which I pointed out that the medical world categorizes agents by their primary effect. Those who view moral considerations as equally important have to take seriously any possibility of a threat to life whether pre-born or later. If Norplant, or any other drug, could produce an abortion if its primary mode of action fails, a moralist would call it an abortifacient.

My handout on Norplant states that the level of the drug is high enough to block the LH surge for the first two years, after which its effectiveness depends on its action on the endometrium. It also makes the cervical mucus impenetrable to sperm. If the LH surge is blocked, ovulation does not occur; hence, an abortion could hardly follow. But we also know that some women who are on Norplant menstruate regularly, hence must be presumed to ovulate. What is not known is whether the cervical mucus allows sperm to penetrate. For the medical world, it would be necessary to quantitate the numbers of abortions produce by testing for a product of the pre-implanted blastocyst. (See ACOG correspondence below.) I suspect neither governments nor the manufacturers are eager to take on such a work, while Catholics are ethically prevented from such an endeavor. We need to know what terms mean to different hearers so that we can dialogue.

H.K.

For Your Information

Dr. Klaus wrote to the American College of OB/GYN (ACOG) on April 5, 1994, stating:

The March ACOG Newsletter reports Dr. Grimes' statement on Post-Coital Contraception which is slated for inclusion in the forthcoming revision of the *Technical Bulletin* on hormonal contraception. The story says: "These therapies should prevent a fertilized egg from implanting in a woman's uterus, the time at which pregnancy begins." I would like to go on record as opposing his definition of pregnancy.

Even if one chooses to define pregnancy only when the maternal organism begins to react to the conceptus, implantation is too late. Several markers of the blastocyst have been recognized. At least early pregnancy factor (EPF) has been documented in IUD wearers whose blastocysts were aborted in the presence of the IUD. [Ref. Smart, et al. *Fertility and Sterility* 1982; 37:201-204.] To define pregnancy as beginning only at implantation may serve the ART community, but diminishes the vast majority of women who value the entire process of procreation.

A June 17, 1994 letter from Rebecca Rinehart, Associate Director of Publications at ACOG responded:

Dear Dr. Klaus:

Your letter raising objections to the definition of pregnancy that appeared in a March ACOG Newsletter article on postcoital contraception was reviewed by the Committee on Technical Bulletins—Gynecology at its past meeting. As you know, we had planned to include this statement in the upcoming Technical Bulletin, *Hormonal Contraception*.

The Committee felt that your points were well taken. In deference to your views, the committee has removed this statement from the document. Thank you for sharing your concerns with us.

Current Medical Research, a supplement of the **NFP Diocesan Activity Report**, is published quarterly. Hanna Klaus, M.D. is the editor. The purpose of the supplement is to serve the Roman Catholic diocesan NFP programs of the United States through providing them with up-to-date information on research within the field of fertility, family planning, and related issues. The Diocesan NFP teacher should be equipped to understand the various methods of contraception and be able to explain their incompatibility with the practice of the natural methods of family planning.