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NFP Specific Research:

Use Effectiveness of the Creighton Model Ovulation Method of Natural Family Planning. R.J. Fehring, et. al. *Journal of Gynecologic and Neonatal Nursing* May 1994: 23:4:303-309.

The authors add their own series of 242 Creighton Model user couples from their center at University of Wisconsin, Milwaukee to three previously reported effectiveness studies. They state that at 12 months of use (life table) the Creighton Model was 98% method effective and 98% use effective in avoiding pregnancy and 24.4% use effective in achieving pregnancy. The continuation rate for the sample at 12 months of use was 78%.

"The effectiveness rate of the Creighton Model is based on the assumption that if couples knowingly used the female partner's days of fertility for genital intercourse, they're using the method to achieve pregnancy." The paper discusses other methods of assessing use effectiveness for instance Trussel and Grummer-Strawn who originated the terminology "perfect" and "imperfect" use, or the WHO interpretation of method and user related pregnancies. Fehring believes the Creighton Model is more objective because it concerns itself only with the behavior of the user. *[While no one can dispute that the biological fertility of the couple ultimately determines whether a given act of intercourse may result in pregnancy or not, natural family planners of other methodologies consider the motivation of the couple to be of primary importance. Only the couple and God can state with certainty what the motivation was, and at times the couple or one partner may be ambivalent. These are the realities which govern the use of any method of NFP. It is important to understand the basis of figures cited. Ed.]*

Interest in Natural Family Planning Among Female Family Planning Practice Patients. J.B. Stanford, et. al. *Family Practice Research Journal* 1994: 14:3:237-249.

Potential interest in a primary care clinic in Columbia, Missouri was assessed. Forty-three percent (43%) of respondents were interested in learning more about NFP; 32% were likely to use it to achieve pregnancy. Younger women were more interested than older women.

Achieving or Avoiding Pregnancy through Scientific Natural Family Planning. H. Klaus. *Pakistan Journal Obstet. Gynaec.* January 6, 1994: 7:1:1-6.

The scientific basis, effectiveness and demographic factors impacting acceptance are reviewed, including V. Kimani's documentation of deepening couple bonding by NFP couples in Kenya.

Spiritual Well-Being, Self-Esteem and Intimacy Among Couples Using Natural Family Planning. R.J. Fehring & D.M. Lawrence. *Linacre Quarterly* August 1994: 61:3:18-29.

In an effort to inform health care professionals, especially nurses, of the full range of options in family planning, Fehring and Lawrence conducted a study to describe how the Creighton Model of the Ovulation Method of NFP as taught in their center, affects psychological, spiritual, and social well-being variables. They studied the effect of NFP on the intimacy, self-esteem, and spiritual well-being of couples who had used NFP for at least one year. They compared these variables among those couples who had stopped using NFP, and who had used contraception for at least one year. Some investigators have previously reported increase in marital tension and sexual dissatisfaction among NFP users based - at least so they thought - on fear of becoming pregnant or dissatisfaction with the necessary abstinence. Some investigators believe that the sustained motivation required to practice NFP would be difficult. It was also thought that artificial contraceptives might relieve couples of anxiety over pregnancy and thus improve sexual relationship. Anxiety and self-esteem are closely related; hence, investigators thought that if contraceptives would lower anxiety over unplanned pregnancy, self-esteem might be enhanced. This in turn might lead to more effective use of contraception. Contrary to these postulates, Tortorici found that couples who used NFP had higher levels of self-esteem than couples who used a variety of artificial methods. The present authors had compared NFP users of the Creighton Model with oral contraceptive users and come to similar conclusions. However, to rule out selection bias, the present study compared current NFP users and those who had abandoned NFP and randomly selected subjects for in-depth interviews.

The instruments used were the Coopersmith Self-Esteem Inventory and the Spiritual Well-Being Index of Paloutzian and Ellison. This index in turn has two sub-scales, religious well-being (RWB) and existential well-being (EWB). Intimacy was measured by the Personal Assessment of Intimacy in Relationships (PAIR) developed by Schaefer and Olson. The PAIR scale consists of five subscales (Emotional, Social, Sexual, Intellectual, and Recreational intimacy) and a Conventionality scale. Qualitatively, NFP users felt that NFP affected intimacy with their spouse positively while there was a negative response with regard to decreased spontaneity and frustration both with abstinence and with the methodology. The contraceptive group reported either decreased tension, anxiety, fear, worry, increased spontaneity, increased confidence, or no effect and no comment. Self-esteem was affected positively in the NFP users as expressed by increased self-control, increased control over fertility, increased self-confidence, increased body awareness, a healthy option or naturalness. The negative effects were decreased control and powerlessness. The contracepting group most commonly reported increased control and satisfaction in planning parenthood, or no effect. Spiritual well-being effects noted among NFP users were enhanced relationship with God, increased faith in God's will/trust in God, appreciation of God's gifts, satisfaction with complying with Church teaching, and satisfaction with control over planning parenthood. The contraceptors most commonly reported no effect, decreased or no relationship with God, being responsible, not complying with God/Church's intention, struggle with Church Teaching, and increased control over planning parenthood, which led to satisfaction with life. Quantitatively, the only significant differences were found in the spiritual well-being and religious well-being scales. There are individual reports of positive effects from both husbands and wives. The authors recommend longitudinal studies and the development of "measurement tools for intimacy and sexuality that more closely capture the conceptionalizations of these phenomena within the context of NFP." *[When the basic definition of "normal" is at issue, studies such as these provide a service, but also highlight the underlying dilemma. Ed.]*

GLOSSARY:

Algorithm: A mathematical proceedure for solving a problem.

Cytology: Cellular biology; the science concerned with the study of the cell

Immunoreactive: That reaction which is activated by the lymphatic system in response to what the body perceives as a foreign body (antigen)

Metabolic Acidosis: A process which upsets the normal pH of the blood which is caused by an increase in the acidic qualities of the blood or by losses of the "base" (alkaline; as in bicarbonate of soda) qualities in the blood as in diarrhea or kidney disease.

Plasma: The noncellular portion of circulating blood. The clear fluid composed of blood and lymph in which cells are suspended.

Primipara: A woman who has given birth for the first time to an infant, or infants.

Principle of double effect: A principle applied in moral theology to those situations of conflict which appear to have both a beneficial effect and harmful consequence. To apply the principle, several conditions must be met. Among them, the foreseen beneficial effects must be equal to or greater than the harmful effects.

Teaching All Indicators is Not the Same as Teaching All Methods — Some Clarifications. E.L. Billings. *Ovulation Method Research and Reference Centre of Australia*, August 1994.

Dr. Evelyn Billings clarifies that teaching all Natural Family Planning indicators is not identical to teaching all methods. Billings lists the common indicators:

(a) Rhythm calculations.
(b) Cervical mucus response to ovarian hormones.
(c) Basal body temperature (BBT).
(d) Pain.
(e) Vulval swelling.
(f) Bleeding.
(g) Self-examination of the cervix.
(h) Inguinal lymph gland sign.
(i) Vaginal response to ovarian hormones.
(j) Ovarian hormone monitoring, using Prof. J.B. Brown's Ovarian Monitor.

The Billings Ovulation Method uses:

(i) The cervical mucus response.
(ii) The vaginal response discharge.
(iii) Bleeding.
(iv) Vulval swelling.

In the Ovulation Method, mucus symptoms must be kept separate to determine the basic infertile pattern and the early day rules, the peak and the peak rule. An additional indicator which has been used as needed is the basal temperature. Billings urges that teachers of the Ovulation Method and of the Sympto-Thermal Methods each seek the same goal and need to understand one another's approaches. However, it is very important not to mix the rules of the systems since confusion and disappointment of clients is the inevitable outcome.

Contraceptive technology and use:

World Population Reference Sheet. *The Population Reference Bureau*, Washington D.C.: 1993.

Reports "49% of women of reproductive age world-wide use reversible or irreversible contraception, 14% use some form of periodic abstinence, while 37% use no method other than (inadvertently) the natural infertility associated with lactation." *[A potential market for NFP! Ed.]*

Lea's Shield, a new barrier contraceptive preliminary clinical evaluations three-day tolerance study. W.L. Hunt, et. al. *Contraception* December 1994:50:6:551-561.

A one size fits all barrier contraceptive - Lea's Shield[R] - is made of medical grade silicone rubber. It is soft, pliable, non-abrasive. The rubber resists degradation and does not support bacterial growth. It is an ellipticle cup-shaped design that forms a barrier over the cervix but remains in position without being held by the cervix, rather by the suction created by the vaginal wall around it, one-size fits all obviating the need for sizing and fitting. A prior report showed that the device was well tolerated 26 hours after insertion and that it was a true barrier to sperm entry into the cervical mucus. Even though it is intended to remain in place for 48 hours, the present study checked tolerance for three days. Ten women completed the tolerance study. The device is inserted using a lubricant jelly, but other than avoiding the menses, no limitations were placed on the time of insertion. Subjects were asked to record any adverse affects and to make comments. The cervix had been photographed and bacteriologic and cytologic studies were performed at baseline and repeated three days later. None of the 10 women who completed the study had significant changes in their bacteriological profile nor in cytologic presentation. To enhance protection against STDs, spermicide can be placed into the bowl of the shield. *[This report does not mention the reaction of the male partner. Ed.]*

Fertility/Infertility:

The Cost of a Successful Delivery with In-Vitro Fertilization. P.J. Neumann, et. al. *New England Journal of Medicine* July 28, 1994: 331:4:239-243.

The average successful delivery with in vitro fertilization costs from $66,667 if the first cycle was successful to $114,286 by the sixth cycle. Not only does the cost increase with each cycle, but the probability that a live birth will ensue declines. Costs ranged from $44,000 to $211,940. When the procedure was carried out for tubal disease, the costs were lower, from $50,000 for delivery for the first cycle to $72,727 in the sixth. When in-vitro fertilization is complicated by a diagnosis of male infertility the cost ranges from $160,000 for the first cycle to $800,000 by the sixth. *[The ethical question of health insurance coverage looms large. Many plans cover the procedure, but how justified this is, is an open question. "In-Vitro Bankruptcy" was the title of the review of the above article in Family Planning Perspectives (Sept./Oct. 1994:26:5:197). The Autumn issue of Endocrine News contains a statement of the current President of the Endocrine Society indicating that in spite of the costs, research on in-vitro fertilization must continue. It is difficult to avoid seeing the latter statement as anything other than an interest in maintaining research funds for members of the organization. Ed.]*

Lactation studies:

Prolactin Bioactivity and the Duration of Lactational Amenorrhea. C. Campino, et. al. *Journal of Clinical Endocrinology and Metabolism* October 1994: 79:4:970-974.

Researchers at the Pontifical University in Santiago, Chile found that only half of fully nursing women remain amenorrheic for six months postpartum. The other half returned to menstruation between 150-180 days despite high suckling frequency and elevated immunoreactive prolactin (IR-PRL concentration). Women with prolonged amenorrhea have a higher basal IR-PRL and a larger IR-PRL response to suckling than those who return to cycling earlier postpartum. In these women, ovulation will occur despite high suckling frequency and in the presence of IR-PRL levels which are 10-20 times greater than those in non-nursing women. Total plasma IR-PRL has a number of prolactin molecular forms which differ in size and bio-activity. This study evaluated differences in bio-activity of prolactin at baseline levels or after suckling to discover if this was an intermediate variable related to the mechanism of lactational infertility.

Biologically active prolactin (BIO-PRL) was measured by the Nb_2 rat lymphoma cell assay at baseline and after suckling in women who were amenorrheic and fully nursing at the beginning of the study, and whose subsequent amenorrhea varied from short to long. Blood samples were taken at 8-hour intervals where elevated post-suckling BIO-PRL levels were found more pronounced at 1600 h and 2400 h, than at 0800 h. This differential response to suckling was also found for IR-PRL. Total mean baseline were: BIO-PRL 129.9 ± 12.1 and 66.6 ± 5.2 g/L while post-suckling BIO-PRL in the long amenorrhea group was 160.1 ± 4.0 vs. 71.9 ± 6.7 g/L in the short amenorrhea group. Blood samples were collected at 2-hour intervals beginning at 0800 h. Blood samples were also collected at 10 minutes and 30 minutes after the initiation of suckling for 6 episodes. Basal samples were obtained at least 90 minutes after the end of the preceding nursing episodes. Nursing patterns, hours of sleep, and eating were also recorded. The ratio between BIO-PRL and IR-PRL was close to 1. Suckling changed the mathematical proportions suggesting the day's residual bio-activity was unrelated to the amount of PRL found by radioimmunoassay in the long amenorrhea group. These changes may be due to a molecular difference in the circulating PRL.

Human plasma has at least two forms of PRL: glycosolated PRL (G-PRL) and non-glycosolated. G-PRL has less bioactivity in the Nb_2 lymphoma assay. G-PRL decreases 50% within 30 minutes after nursing. This could explain the increase of BIO-PRL over IR-PRL observed in the long amenorrhea group. The change also may be independent of the prolactin factors and could be due to non-lactogenic factors.* Despite attempts to rule out possible interference of human growth hormone (hGH), the researchers cannot be certain that other factors were not present. While some individuals believe that lactational amenorrhea, which is found after prolactin levels return to normal, may be due to a general disruption of the hypothalamo-pituitary cascade which leads to ovulation, it is possible that this study has shed new light on a differential marker. Women who respond to suckling with a rise in total BIO-PRL and a change in relationship between BIO-PRL and IR-PRL have long amenorrhea - the exact mechanism of the effect of the prolactins on the ovary, pituitary, and hypothalamus remain to be established.

*[*Non-lactogenic factors include: the serum of normal men and women; the serum in pregnant and postmenopausal women and in a variety of hyper prolactinemic disorders. Ed.]*

Recovery of ovarian function after childbirth, lactation and sexual activity with relation to age of women. C. Morán, et. al. *Contraception* Nov. 1994: 50:401-407.

Mexican breastfeeding women were studied to estimate the time for recovery of ovulation and initiation of sexual intercourse after childbirth. Ninety women were divided into three age groups: 1) adolescents less than 19 years old; 2) younger mothers aged 19-32, intermediate age level; and 3) older women aged 32 years or older. Sexual relations were resumed between 41 and 43 days postpartum by all three groups. The time of resumption of menstruation in the lactating women was shortest (85 days $\pm$ 4.9 in the young mothers' groups). It was longest among older women (104.4 days $\pm$ 5.7) and next long in adolescents (95.9 $\pm$ 3.8). All women had received the CU 380A IUD postpartum. After first menses, serum progesterone level of higher than 5_n/ml was considered diagnostic of ovulation. Since women resumed sexual relations at no more than 6 weeks postpartum, the authors conclude that an effective method of contraception is necessary as soon as possible after delivery. *[Unfortunately the Lactational Amenorrhea Method was not given much weight in this paper even though it was mentioned among the references. There was no mention of NFP Ed.]*

Menapause (pre & post):

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."

In summary, the study indicates that after menopause, women should add a daily supplemental dose of Potassium Bicarbonate to counteract the decrease in bone mass associated with loss of estrogen in the aging process.

International consensus conference on post-menopausal hormone therapy and the cardio-vascular system. R.A. Lobo & L. Speroff. *Fertility and Sterility*, Supplement 2, December 1994:62:6:176S-179S.

Within the last 30 years stroke mortality has declined by 60%, coronary mortality by 30%. While surgical and medical improvements can account for some of these, perhaps two-thirds of the improvement is due to preventive measures. Post-menopausal hormonal therapy has been advocated strongly, but there have been no large random clinical trials to evaluate the actual role of hormone replacement therapy. Perhaps 30% of post-menopausal women are currently on hormonal replacement therapy. Continuation has been a major concern. Concerns about breast and other cancer, regular or inappropriate vaginal bleeding, intolerance of medication, weight gain, and inadequate discussion or management of these problems account for low compliance as do cultural and socio-economic factors. There are many unanswered questions which should be a high priority for research. These include the risks and benefits of the combined estrogen/progestin treatment; sequential or continuous administration and the effects of different routes of administration. Questions relating to the difference in response by diverse ethnic, racial, or socio-economic groups or women with diabetes mellitus and the effect of psychosocial factors on cardiovascular disease, also need to be addressed. Greater understanding of the biology of blood vessels and the pharmacological effect of estrogens and progestins is needed. An investigation into which progestin and at what doses will give the greatest benefit and do the least harm while maintaining endometrial protective effect is also recommended. The influence of diet *[and life style. Ed.]* on cardiovascular and breast cancer risk needs to be evaluated as does the effect of hormones. What is the impact of long duration of hormonal use? *[There are very many unanswered questions about the value of hormonal replacement therapy. Ed.]*

Adolescent Sexuality:

An evaluation of a new teenage clinic and its impact on teenage conceptions in Nottingham from 1986 to 1992. S. Wilson, et. al. *Contraception* July 1994:50:77-86.

A special drop-in contraceptive clinic for teenagers in Nottingham, England was developed in 1987. It cared for more than 1,500 young people in its first three years. One-third were aged 15 or younger; 25% were aged 16. Seventeen percent (17%) of attendees came for emergency contraception; 8% for abortion counseling and referral. In comparing conception rates for teenage women with women aged over 20 years in the area, there was reduction in teenage conception rates among attendees of the special drop-in clinic. Currently a contraceptive clinic is planned in conjunction with a youth center, since the special drop-in clinic achieved very little.

Medical Clinics in Junior High School: Changing the Model to Meet Demands. J.G. Dryfoos. *Journal of Adolescent Health* November 1994:15:7:549-557.

Dryfoos reviews the changing focus of innercity junior high school-based health clinics undertaken by the Columbia University School of Health between the years 1984-1993. Four clinics were set up in junior high schools in the Washington Heights area of New York City serving more than 4,000 students' physical, psychological, social, and family needs for a period of over seven years. Half of the visits were for medical services, 38% for social services, 13% for health education. Primary health screening, mental health services, and pregnancy prevention were identified among the critical needs in this community. In 1991 nearly one-third of the male students had experienced the death of a family member or of a friend; 10% had experienced the divorce or separation of their parents; 5-9% had either been beaten, mugged, or shot; and 13% had attempted suicide. Thirty-three percent (33%) of the males and 10% of the females were sexually experienced; 40% had used beer or wine within the last 30 days; 5% used liquor; and 2-5% had smoked cigarettes within the previous 30 days. New York City's Board of Education forbids offering birth control services on-site, but as the staff come from the Young Adult Clinic at Columbia Presbyterian Hospital referrals for services are easily obtained without loss of continuity of care.

Besides health programs, the medical and social services in the schools offered social skills training, case management, career orientation, academic skills, parent advocate programs, parent workshops, school involvement, and school restructuring. While the percentage of sexually active students overall was relatively small, of the currently sexually active students, 67% who had made one or more visits to the social worker reported using birth control. These compared to less than half of those who did not see a social worker. Forty-eight percent (48%) who responded to the student survey were using contraception. None of the sexually active females who had seen the social worker had been pregnant. These compared to 9% who had not been seen by the social worker. Changes in attitude about pregnancy were noted among the girls who visited the clinic, but not among the boys. While pre- and post-tests of life planning groups showed a significant increase in knowledge and positive attitude about the use of birth control, post-program behavioral measures of contraceptive use did not differ significantly between the experimental and control groups. Increased demand for services required reorganizing services. Students who needed immediate care received the highest priority. Group interventions were developed for social skills as well as for mental health awareness. Referral mechanisms for students potentially involved in high-risk behavior were also employed. The goal was to effect system-wide changes that will improve the social environment for everyone involved, including the school staff, families, and community.

Pro-active approaches have included case-finding and the provision of a full-time health educator whose sole responsibility is to provide individual attention to students who have been identified as sexually active. These students are invited to participate in groups that concentrate on decision-making, assertiveness training, and other components that have been effective in postponing sexual intercourse and/or encouraging regular contraceptive use. Staff described this approach as "In Your Face," which they believe could be even more effective if they were permitted to provide contraception on-site. School attendance and performance rates have improved, as has the school environment. Students and families have been empowered and the program is being expanded to the large local high school. *[While the general health services are documented, changes in quality of life are reported as impressions. Ed.]*

Condoms and Adolescent HIV: A Medical Evaluation. R. Alessandri, et. al. *Linacre Quarterly* August, 1994: 61:3:62-74.

The authors are a pathologist (Alessandri), an allergist and an Orthodox Rabbi (Friedman) and an inspector for the American Association of Blood Banks (Trivelli). They cite well known data: 1) Condoms often break or slip off, a rate of up to 14.6%; 2) FDA quality control standards allow no more than 4/1000 defective condoms on water test leakage, but many batches tested had considerably more failures; and 3) the dangers of anal sex. Among teenagers, the contraceptive failure of condoms has been reported to be as high as 50%. While a large portion of that figure may be due to non-use, it is known that high-risk adolescents very seldom use condoms consistently, if at all.

Kirby reported in 1991 that providing contraceptives in school-based clinics had no impact on contraceptive use. Others found that overall consistent condom use for adolescents was 16% and somewhat higher in "monogamous" relationships." Among condom users the fear of AIDS vs. fear of unplanned pregnancy, tends to vary

with the intensity of the relationship. Fear of AIDS appears to be the stronger motivator among casual encounters, while fear of pregnancy is a strong motivator among those in more committed relationships. Despite the obvious hazards of advocating sexual promiscuity, SIECUS and Planned Parenthood continue to "promote healthy sexuality in young people by giving them the skills they need to help them make responsible healthy sexual decisions," but the implication is that the responsibility is limited to the prevention of STD and AIDS. Kirby recognized the failure of his approach and attempted a program of values clarification and decision-making which he considered a failure. His next (third generation) program was based on abstinence which he discarded despite encouraging outcomes. He then proceeded to a fourth generation mixture of abstinence and contraception, a program he calls "Reducing the Risk." Kirby concluded that his program increased consistent use of contraceptives among "low risk" students but did not reduce sexual activity. The authors remind readers that mere indoctrination of ideas may not have tragic consequences for adults, but may be misunderstood and acted upon by immature youngsters. They advocate traditional marriage as one of the most successful teachers of responsible behavior.

Chacteristics Associated with Contraceptive Use Among Adolescent Females in School-Based Family Planning Programs. C. Brindis, et. al. *Family Planning Perspectives* July/August 1994: 26:4:160-164.

In an effort to perceive adolescent inconsistency in contraceptive use, 162 female family planning clients at four school-based health centers in California were studied. Clients who have more contact with the family planning program exhibited more consistent contraceptive use than those with less contact. Young women whose follow-up visits are scheduled to occur within one month of their previous visit were less likely to be consistent contraceptive users than the others. There was no difference whether the contraceptives were dispensed on site, whether health education or counseling were provided by health educator, or whether services were part of a comprehensive area of health services. The inverse relationship between the scheduling of follow-up visits and contraceptive use may "indicate that the school-based centers are identifying clients in need of closer follow-up but are not able to convince these clients to return for their follow-up visits, or are unable to change their contraceptive use even with sustained contact." *[The authors speculate about identifying barriers to contraceptive use without averting to the basic contradiction between contraception and personal integration. Ed.]*

Sexual health education interventions for young people: a methodological review. A. Oakley, et. al. *British Medical Journal* January 1995: 310:158-162.

Oakley purports to provide an academically oriented methodological analysis of studies of educational interventions for young people in regard to sexuality. While details of methodology are looked at in careful computerized algorithms, the paper misses the forest for the trees. Apart from the fact that some of the most significant papers from the United States were missed, (i.e. Douglas Kirby's more recent works on Reducing the Risk from Family Planning Perspectives), the paper begins with the assumption that sexual behavior has no value and that it can be studied as if one were studying the effect of drugs on disease. The authors assume that one should be able to randomize approaches. *[Anyone who has worked in this field knows that one must first win free consent of participants and that one cannot push people into a method of family planning which they do not want, if one expects continuation. Ed.]* The authors project an expectation that risk free sex for the young can and must be assured.

Among the 270 papers which the authors examined, methodological flaws were found in most. There were eight methodological criteria: a) clear definition of aims; b) description of the intervention package and designs significantly detailed to allow replication; c) inclusion of a randomly allocated control group; d) provision of data on numbers of participants recruited to the study and control group; e) provision of pre-intervention data for the study and control groups; f) provision of post-intervention data for the study and control groups; g) attrition rates reported for the study and control groups; and h) findings reported for each outcome measure as described in the aims of the study. Adequacy of sample size and adequate follow-up period were also considered important.

Of the 619 studies considered, nearly 90% were carried out in the United States. 5% were from the UK, 3% in other European countries, and 1% elsewhere. Three-quarters of the interventions described were in school settings, 46% focused the intervention on HIV and AIDS while 54% of the studies were concerned with pregnancy prevention, STDs or sexual health more generally. Only 23% had a follow-up interval of 12 months or more while 38% had less than 3 months.

Only four met all eight criteria, while 66% met five or fewer. Twelve studies met the four core criteria: randomly allocated control groups or matched controls studied before the intervention; utilizing study characteristics as outcome variables; providing pre- and post-intervention data, and reporting on all outcomes. "If a study presented information only after the intervention, there must have been evidence of equivalence between stayers and dropouts." Intention to treat "analysis" must have been used. Even with these reduced requirements the acceptable number of studies was only 11. Eight were school-based, three comprised college students, and one worked with runaway youth. Half the studies focused on HIV and AIDS within the broader context of sexual risk-taking behavior. Three used random allocation without specifying the method; one used sealed envelopes and two used random numbers.

Based on these criteria, the writers judged that the studies by Barth et al provide three effective interventions from North America. "Preventing Adolescent Pregnancy with Social and Cognitive Skills" aimed at increasing knowledge and student-parent communication and improved both parameters. D. Clemente's "Evaluation of School-Based AIDS Education Curricula" improved knowledge about AIDS and STDs and found that students were more accepting of classmates with HIV and AIDS. The third was an intervention with a group of runaway adolescents by Rotheram-Borus entitled "Reducing HIV Sexual Risk Behaviors among Runaway Adolescents." It indicated more consistent condom use and less high-risk sexual behavior.

A study by Herz et al., designed to reduce teen pregnancies, was included among those partially affective interventions with various modes of giving information about HIV/AIDS, measuring knowledge and anxiety level. It was a 15 session program whose curriculum included personality, physical and emotional development, nutrition and hygiene, reproduction, relationships, and developing educational and career goals. Compared to control subjects, participants displayed improved knowledge, increased awareness of birth control methods, and a greater tendency of boys to acknowledge mutual responsibility for contraception.

Interventions judged ineffective included several single intervention HIV information programs. The MacMaster (Ontario, Canada) Teen Programs with 13 year olds which provided a four year follow-up assessment of retained information about development, sexuality, relationships, improved communication, developing problem solving and decision-making skills, was also considered ineffective. The authors stressed the lack of information on contraceptive methods and their use in the study; the topics considered were guidelines of the Ontario Ministry of Education.

Two interventions compared the effect of lecture alone, small group discussion alone, both together, and a lecture plus review, and found that there was no clear effect. One was an 8-month, 12-session education program designed to increase knowledge of human sexuality among 9th grade students in South Carolina by means of a multimedia approach. The other was a program among university undergraduates with varied instructional formats.

One study reported by Christopher and Roosa was judged harmful. It was an abstinence-education program ("Success Express") designed for a group of low-income minority youths in Arizona with a mean age of 13 years. Six lessons intended to reduce pre-marital sexual activity through teaching abstinence. The program contained information about reproduction, the implications and risks of sexual behavior and the development of decision-making skills. The program had a high rate of attrition. Over one-third of the students and a quarter of the controls dropped out, but none of the desired changes in attitudes or behavior occurred in either the total group or in the sub-group who were virgins before intervention. More young men in the intervention group than in the control group claimed to have initiated intercourse by the end of the program. *[This is a wonderful example of bean counting, more specifically allowing an algorithm to reduce one's overview. The authors of the analysis and apparently the authors of the studies had already decided that contraception and protection from STD was normative and that abstinence could be taught by lecturing young people. If the authors had been more diligent in their literature search, they would have found for instance, Kirby's most recent work which is summarized in the paper of Alessandri et al. above. Ed.]*

Psycho-Social Sciences:

Determinants of Couple Agreement in U.S. Fertility Decisions. L.B. Williams. *Family Planning Perspectives* July/August 1994:26:4:169-173.

Couple agreement about the wantedness of a baby was studied in interview data from 8450 women in the 1988 National Survey of Family Growth. Couple Agreement on the wantedness of a birth was 29% among teenagers, 35% among never married women, 45% among black women with three or more pregnancies, and 51% among women with less than a high school education. Overall, 69% of couples had agreement on the wantedness of births. When women had third or higher order of births, 58% were less likely to plan jointly, while 69% of first births, and 76% of second births were planned jointly. Black women, unmarried women, teenagers, and women with third or higher order of births are all more likely to have a birth when the man's preference is unknown. Women who have never married are far more likely than married women to have a birth when the woman desires a baby but the man does not. However, black women are significantly more likely to have a birth which the man wanted but the woman did not. The researchers review a vast body of data which tends to show that when women are more highly educated, particularly having had more than three years of college, they are far more likely to have babies when they want them, as opposed to when their spouses do. Among white women, neither age nor marital status were statistically significant when comparing jointly planned births and those which occurred when the man's preference was unknown. Overall, the likelihood that both partners wanted the birth increases with educational level. When the data are assessed separately by race, black women consistently report less joint planning than white women, while there are no significant variables for women of Hispanic origin. There is a relative prevalence of births which were wanted only by the women among those women who have never married, and who intended to raise the baby by themselves. In these instances, there are wider social consequences to be considered.

Wilson found that "black males have high unemployment; hence, black women may at times be encouraged by family members to have the birth out of wedlock, and the child is then absorbed into the kinship system rather than adding an unemployed father to the family's

financial burden." More detailed data about relationship dynamics are necessary to evaluate the strengths of these factors. Among the other aspects to be considered are more detailed information about female autonomy, as well as decisions surrounding pregnancies which in the end did not take place. Currently many studies report the fathers' feelings by proxy rather than by direct interview.

Of Interest—Relevant Ethical Studies:

"Uterine Isolation" - Unacceptable in Catholic Teaching. T.J. O'Donnell, S.J. *Linacre Quarterly* August 1994: 61:3:58-61.

Fr. O'Donnell originated the idea that uterine isolation could be an acceptable alternative to hysterectomy in cases where the uterus was so damaged that it could not safely carry another pregnancy but the woman could not tolerate a cesarean hysterectomy. Since hysterectomy is begun by cutting the tubes at their junction with the body of the uterus, Fr. O'Donnell and Dr. Andrew Marchetti thought that if the patient was in serious condition the remainder of the procedure could be postponed indefinitely, or omitted. In practice, this became a euphemism for tubal ligation. Acceptability of this teaching had been proposed under the principle of double effect. In July 1993 the question was referred to the Congregation for the Doctrine of the Faith by the National Conference of Catholic Bishops (USA). They replied, and Fr. O'Donnell acknowledges, that the argument will not stand, that uterine isolation is solely contraceptive sterilization.

Letters to the Editor:

October 13, 1994

Dear Dr. Klaus:

In Current Medical Research Vol. 5, Nov. 4, Fall 1994, you report on our paper "Trial of a new method of natural family planning in Liberia"(1). In an editorial note you remark that our cost per couple year of $55.80 and $56.10," . . . reflects initial start-up and operation research costs for both methods." This is not correct. In the paper we say that "To calculate cost-effectiveness, we divide the cost of service to MMM and ST/OM clients by their CYP." The cost of start-up and operations research costs were **not** included in the analysis of service costs because they do not contribute to service costs.

A previous paper more fully describes our methodology for estimating cost effectiveness of the NFP program in Liberia (2). In that paper we concluded that "The total costs per CYP...are within the range of costs associated with clinic or community based provision of other family planning methods in Kenya and Nigeria . . . these results suggest that NFP can be as cost-effective as other methods of family planning in the African context."

It is important to have reliable estimates of NFP cost effectiveness. These estimates are tools that can be used in several ways. First, to convince funding agencies of the reasonableness of NFP service and second, to allow the program manager to work at reducing unnecessary expenditures and thus over time reduce the cost of service.

Sincerely,
Robert T. Kambic, MSH
Research Associate
Johns Hopkins University

1. R.T. Kambic; C.A. Lanctot; & R. Wesley. "Trial of a new method of natural family planning in Liberia." *Advances in Contraception* 1994:10:111-119.
2. R.H. Gray; R.T. Kambic; C.A. Lanctot; M.C. Martin; R. Wesley; & R. Cremins. "Evaluation of Natural Family Planning Programmes in Liberia and Zambia." *Journal of Biosocial Science* 1993:25;249-258.

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.*

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.

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