Abstract:
A Management Information System to Strengthen Natural Family Planning Programs: Case Studies and Implications for the Future

A Management Information System (MIS) was developed based on the Natural Family Planning (NFP) Client Learning Model. The Client Learning Model delineates the components that make up an NFP service and describes the activities of an NFP program (including how the services interfaces with the client and what the client does at each stage in the service process). The MIS was tested by NFP programs in 8 countries: two programs in Burkina Faso and one program in Chile, Ecuador, Kenya, Mauritius, Papua New Guinea, Senegal and Zambia.

By linking client actions to program activities through the MIS, managers in these programs analyzed indicators and were able to see how their services impact on clients. For example, they identified ways to better target their outreach and community education and measure the impact of new strategies on the efficiency of client recruitment. They were able to identify the percentage of their clients who dropped out of the program before they reached autonomy, determine the reasons for drop-out, and adjust their activities to maximize retention to autonomy. They determined the numbers of clients taught by each teacher and redistributed workloads. They assessed the rate of new autonomous users and increased it by emphasizing appropriate follow-up. Managers with programs operating in multiple sites were able to compare performance among them and identify the most effective approaches as well as redirect resources.

This paper focuses on the MIS' indicators, how it can improve program performance, and its implications for improving the coverage and quality of NFP programs.

Commentary:
This paper discusses the development of a system around which several NFP programs in different countries have been structured. "By linking client actions to program activities, this system enables managers to see how their services impact on clients". The issues raised are particularly relevant to teachers of the Creighton model, which has arguably the most developed system of NFP service provision in the US today. 

David Powers, MD, CNFPMC
Biosketch:

Presenter:
Victoria H. Jennings, Ph.D.
Associate Professor, Department of Obstetrics and Gynecology; Director, Institute for Reproductive Health; Georgetown University Medical Center

Co-Authors:
Eduardo Castilla, MD
Director, Latin American Collaborative Study of Congenital Malformations (ECLAMC); Sao Paolo, Brazil

Enrique Gadow, MD
Chairman, Department of Obstetrics and Gynecology; Center for Medical Education and Clinical Investigations, Buenos Aires, Argentina

Joe Leigh Simpson, MD
Chairman, Department of Obstetrics and Gynecology; Baylor College of Medicine, Houston, Texas USA

Abstract:

Unintended Pregnancies: Their Implications for Future Research and Service Delivery

The concept of "unintended pregnancy" has been much discussed in recent family planning literature. This paper, which is based on post-partum interviews with 10,000 women delivering in 18 Latin American hospitals, suggests that unintended pregnancies are not well defined or understood and that new approaches are needed to address this issue.

Of the 10,000 women interviewed, approximately one-half stated that they had not intended to become pregnant. Those who stated that their pregnancy was unintended were asked whether they or their partner were using a family planning method prior to the pregnancy. Of the women who had not intended to become pregnant, who stated they were using a method were asked which method(s) they were using during the cycle in which the pregnancy occurred (over 40% were using oral contraceptives, 14% Natural Family Planning, 12% condoms, 8% Coitus Interruptus, and the remainder combinations of various methods), and why they thought they became pregnant (i.e., method failure, user failure, not actually using the method during the cycle in which the pregnancy occurred, other). Those who were not using a family planning method during the cycle in which unintended pregnancy occurred were asked their reason(s) for non-use. In addition, women were asked when during their menstrual cycles they thought they were most likely to become pregnant.

This data provides important insights into the relationship between pregnancy intention and family planning use, the reasons for non-use, women's opinions of why pregnancy occurred during cycles when they were using specific methods to avoid pregnancy, and the significance of women's knowledge of the fertile and infertile times of their menstrual cycles.

Implications for further research and for family planning programs, with an emphasis on those that provide Natural Family Planning services, are discussed.

Commentary:

The Creighton Model emphasizes routine questioning of the NFP client-couple concerning their intention: use of NFP and the couple's receptivity to an unplanned pregnancy. Many practitioners will testify that the behavior of a couple does not always correspond with their expressed intentions: couples who say they intend to avoid pregnancy will sometimes engage in 'achieving-related behavior' before they consciously decide to achieve pregnancy. This study is a summary of interviews with a large number of Latin American women who said they had not intended to become pregnant. It discusses their decision-making process surrounding the pregnancy and, for those who were NFP users, their knowledge of when conception occurred. It raises some issues relevant to the every-day teaching of NFP practitioners.

David Powers, MD, CNFPMC
Richard J. Fehring, DNSc, RN
Richard J. Fehring is an Associate Professor at Marquette University College of Nursing. He is also a certified Natural Family Planning Practitioner and the coordinator of Natural Family Planning services at St. Joseph's Hospital Center for Women and Infants, Milwaukee, Wisconsin.

Nancy Gaska, MSN, RN
Nancy Gaska is a Pediatric Clinical Nurse Specialist and a Natural Family Planning Practitioner affiliated with Marquette University College of Nursing.

Abstract:

Evaluation of the lady free biotester in determining the fertile period

Background: A number of small hand held microscopes have recently been developed for facilitating the self observation of salivary and/or cervical fluid ferning patterns. Ferning patterns in either saliva or cervical mucus are a response to rising levels of estrogen and follicular development. Theoretically, when ferning is present in either of these two body fluids a woman is potentially fertile. Therefore, a device that facilitates the observation of microscopic ferning will also help to define the time of fertility and sterility of a woman's menstrual cycle. The specific purpose of this study was to evaluate the accuracy of, one such microscope, the Lady Free Biotester, by comparing it with two other standardized markers of fertility, i.e., the self observation of cervical-vaginal mucus and the self-detection of the luteinizing hormone (LH) in the urine.

Method: After human subject approval was obtained from the Marquette University Office of Research and Sponsored programs, 12 seasoned female natural family planning teachers (average age 34.6yrs) were purposively selected from the membership of the American Academy Of Natural Family Planning and asked to be participants in this study. After providing verbal and written consent, they were asked to observe their cervical-vaginal mucus, test their urine for LH and observe salivary and cervical-vaginal mucus ferning patterns (with the Lady Free Biotester) for two menstrual cycles. Ferning patterns in the saliva and mucus were rated on a three point scale, with 1 = no ferning; 2 = partial ferning; and 3 = full ferning.

Results: Twenty-four cycles yielded interpretable data. Three of the cycles did not have an observed LH surge. In 20 of the 21 (95.2%) cycles with an LH surge, the peak day in cervical mucus fell within ± 3 days of the LH surge, in 14 of the 21 cycles (66.6%) the peak in cervical-vaginal ferning fell within ± 3 days of the LH surge, and in 16 of the 21 cycles (76.2%) both the peak in AM and PM salivary ferning fell within ± 3 days of the LH surge. Data indicated that there was a very strong correlation between the LH surge in the urine and the peak in self-observed cervical-vaginal mucus ferning (r = 0.99, p < 0.001) and salivary ferning (r = 0.98, p < 0.001). There was also a strong correlation between the observed peak in cervical-vaginal mucus and the cervical-vaginal ferning (r = 0.99, p < 0.001) and AM salivary ferning (r = 0.97, p < 0.001). There was no discernible beginning or end of the fertile period with either the self-observation of salivary or cervical-vaginal ferning.

Conclusion: Although the peak in self-observed salivary and cervical-vaginal mucus ferning patterns provided a strong correlation to the urine LH surge, there are too many uninterpretable variations in salivary and cervical-vaginal ferning patterns to be able to define the fertile period. Further testing of salivary ferning patterns is recommended before widespread use of these devices for family planning.

Commentary:

There continues to be investigation into technology that will confirm what NFP physician, teachers, and couples have known for years: couples can understand and cooperate with their fertility using simple, easy to learn observations and charting. This study looks at the use of a hand held microscope to determine the fertile time based on ferning of the saliva or cervical-vaginal mucus. Although there was a strong correlation between the LH surge (which is known to be closely correlated with ovulation) and the peak in self-observed salivary and cervical-vaginal ferning, it was difficult to assess the beginning and the end of the fertile time. There have been no device to date that have outperformed natural family planning that has been taught by certified practitioners using standardized methods. Devices such as the one described above may have a role in helping couples with continuous mucus or infertility identify their peak day, and therefore help them with either the achieving or avoiding behavior that they intend.

-Peter Danis MD, CNFPMC
Biosketch:

Franca Crippa, Ph.D.
Dr. Crippa was born in Desio (Milan, Italy); July 1994, Doctoral degree in Statistics, discussing a thesis in Armax Models applied to fecundability; September 1992 researcher in Demography at University of Pavia; November 1996 confirmed researcher in Demography at University of Pavia; Cooperation on NFP with Dipartimento di Statistica, Universita di Milano, supplying funds for research on NFP in Milan and connected areas.; Cooperation with Center of Studies and Research on Family, Catholic University, Milan

Wilma Binda, Ph.D.
Dr. Binda was born in Varese (Italy); Degree and Doctoral degree in Social Psychology; Associate Professor in Social Psychology, Catholic University, Milan; Member of the Scientific Committee of: Center of Studies and Research on Family, Catholic University, Milan

Abstract:

Analysis of family planning use and discontinuation: An application to some Natural Family Planning (NFP) users in Italy.

Measurement of global contraceptive effectiveness involves several aspects of clinical and behavioral responses to a technique. In order to gain insight into effectiveness, it is necessary to know the proportion of user-couples who continue to use the method successfully. Relevant information, both on clinical and demographic aspects of contraception, is given by discontinuation rates due to different causes.

As failure increases with duration of exposure to risk, an adequate analysis is based on failure per unit of time. Life table techniques allow one to compute indicators per unit of time, which take into account heterogeneity in its various forms. Discontinuation rates, in particular, vary considerably among different strata of users for different termination causes.

In our context, demographics of NFP users are as follows: most user-couples are married or in stable partnerships. 58% have no children, 18% have one child, 23% have two or more children. Given the self-selection of the users (described in detail in the analysis and quite similar to the last National Fertility Survey data) our results support the impression of two distinct attitudes towards NFP: a short-term approach, which in our study agrees with the experimental use of natural methods during a phase of reproductive decision-making, as well as an almost permanent commitment to using natural methods. Long-range tests show the relevance of both former use of family planning techniques and present family planning intentions, in particular when termination is due to dissatisfaction with the present natural method. Other causes have little impact, as in particular accidental pregnancy involves only a modest number of couples. On the whole, total abandonment rate is highest at twelve months, including planned pregnancy. It keeps close to 20% at two years from entry and drops below 10% after the third year. Couples successfully overcoming this initial period tend to use NFP longer, and median residual lifetime increases with time.

Type-specific rates may be estimated considering only women exposed to the risk of unplanned pregnancy (Tietze, Lewitt, 1973). From this perspective, abandonment is mainly due to dissatisfaction with the method. Within the first year almost 20% of women who are exposed to the risk of an unplanned pregnancy drop NFP because they find natural methods either too difficult to use or they are experiencing personal difficulties considered "less suitable" than other contraceptives.

Some psychological traits concerning childbirth and its avoidance, implicit in the study, are sketched in conclusion with particular attention to the issue of family size determination.

Commentary:

This paper looks at continuation rate for NFP users in Italy, and the reasons for discontinuing. The authors cite a discontinuation rate of 24.8% at 12 months for those women "exposed to the risk of unplanned pregnancy." This is considerably higher than the statistics compiled by Dr. Hilgers (11.3%). In the Italian study by 1 year 19.3% had abandoned the method because of "personal dissatisfaction." Are the teachers in Italy using a standardized approach to NFP? Is the teaching done on a personal one to one basis with frequent follow-ups? Are their cultural issues and differences in the couples' expectations that might explain the higher rate of discontinuation? Were the pregnancies "accidental"? At 48-60 months, the author's table shows 73.6% of women have stopped using NFP. This number included all women who had become pregnant! Should this be considered discontinuation of the method? I suspect that many of these couples never abandoned the method and restarted NFP observations after pregnancy.

This paper does provide some insight into long term use of NFP, but the data will be confusing unless the reader understands the authors definitions. The study seems to reinforce the "contraceptive mentality" that pregnancy means the method has failed.

—Peter Danis M.D. CNFPMC
Biosketch:

Joseph B. Stanford, MD, MSPH, CNFPMC

Dr. Stanford is assistant professor in the Department of Family and Preventive Medicine at the University of Utah School of Medicine in Salt Lake City. He is active in research in a variety of dimensions of NFP, and is currently President Elect of the AANFP.

Ken Smith, Ph.D.

Dr. Smith is a professor in the Department of Family and Consumer Studies at the University of Utah.

Abstract:

Characteristics of Creighton Model users

Background: Limited information is available about the characteristics of women who choose to use modern methods of NFP in the United States. One previous study indicated that users of the Ovulation Method and Sympto-Thermal Method in Oregon tend to be highly educated and about 60% Catholic.

Objective: To define the characteristics of new users of the Creighton Model Ovulation Method (CrM) at several CrM centers in the United States.

Methods: This study retrospectively abstracted and analyzed data from 935 CrM General Intake Forms (GIFs) and associated standardized CrM records, representing 935 new users of the CrM at eight different CrM centers in four different cities (in Missouri, Nebraska, Kansas, and California) for the years 1990-1996. Excluded were subjects for which the GIF was unavailable (rare) and couples who had never attended follow-up (approximately 200 additional couples).

Results: The average age of women at entry was 28.4 (range 18-49), and of men 30.4 (range 19-64). Sixty-three percent of couples were married, 22% engaged, with the remaining 15% of women single. Eighty-five percent of women and 84% of men were Caucasian, with the next largest racial groups being Hispanics and Oriental, each with about 5% for both sexes. With regard to religion, 71% of women were Catholic, 20% were Protestant, and the remaining 9% were distributed among other religions (of men, 60% were Catholic and 24% were Protestant, with 16% distributed among other religions). Sixty percent of women and 59% of men were college graduates. Almost half (47%) of couples reported a combined household income of over $40,000 per year. Sixty percent of women had no previous pregnancies, but 20% had been pregnant prior to age 20. Ten percent had previous spontaneous abortions and 6% had previous elective abortions. Nineteen percent had undergone previous gynecologic surgery of various types. The most common previously used methods of family planning were as follows: 53% birth control pills, 34% condoms, 34% none, 10% withdrawal, and 8% basal body temperature. The reproductive categories of the women at entry were as follows: regular cycles 43%, long cycles 3%, breastfeeding or breastfeeding/weaning 13%, postpill (within the past year) 28%, premenopause (40 years or older) 3%, postpartum/not breastfeeding 2%, postabortion 1%, and infertility 9%. Intended use of CrM at entry included 65% to temporarily avoid pregnancy, 8% to permanently avoid pregnancy, 18% to achieve pregnancy (of which half reported a history of infertility), and 8% for fertility awareness only. Younger women were more likely to want to use CrM to temporarily avoid pregnancy, whereas older women were more likely to want either to permanently avoid pregnancy, or to achieve pregnancy. The mode number of children desired at entry was two. (Some totals do not equal 100% due to rounding.)

Conclusions: Among these CrM Centers, users of CrM tend to be well-educated, more affluent, and predominantly Caucasian. Efforts to make CrM accessible to couples of greater social, ethnic, and economic diversity are warranted.
Abstract:

A reliable, inexpensive, user friendly ovulation prediction device

Family planning choices for women would be broadened if they had access to an inexpensive, user friendly instrument that helped them determine their fertility status reliably and objectively. It is likely that if such a device were available, more women/couples would choose natural family planning. Researchers interested in natural family planning from two US universities have joined efforts to develop such a device.

The goal is to develop an inexpensive, accurate device that a woman could use at home in order to determine immediately if she is in the fertile time of her cycle. In order to take into account the lifespan of the gametes, the device would actually need the capability to predict ovulation at least four days in advance. Accuracy and reliability are the most important requisites for the end product. It has to be rugged enough to function in the environment found in the average home and to withstand use by average women, and durable enough to last several years. It has to be easy to use and maintain, be aesthetically appealing, and not require supplies. Importantly, it's cost would have to make it accessible to women in developing countries.

All these requirements have been met, and a "smart" device is in the final stages of development.

The first step in this project was to find a reliable indicator of a woman's fertility. The water content of cervical mucus was identified as such. A sensor that can read and differentiate degrees of mucus hydration in this range has been developed and tested. The correlation between increasing mucus hydration and the timing of ovulation will enable the device to indicate to a woman whether or not she is likely to become pregnant if she has intercourse in the four days following a reading. Work is currently underway to fine-tune the sensor, to determine the optimal physical configuration the consumer version of the device should have, and to obtain information of use in non-laboratory clinical, and in non-clinical environments.

This paper will present the biological and physical bases for this device, the results of the laboratory work undertaken to determine the reliability of hydration as a predictor of the fertile time, and results of comparison of hydration levels determined in-vivo with the device and in-vitro by lyophilization (considered the gold standard technique). Preliminary information will also be shared on device configurations and of self use at home by study subjects.