

Evangelium vitae and Promoting a Culture of Life through Natural Family Planning

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ABSTRACT: This paper considers the implications of Pope Saint John Paul II's encyclical *Evangelium vitae* (*The Gospel of Life*) for the use, teaching, and research of natural family planning (NFP). In this encyclical the pope analyzed the connections between use of contraception and abortion, encouraged the development of NFP centers, advised that NFP be provided to all married couples, urged health care professionals to be involved in teaching NFP, and recommended that universities be involved with research in NFP, especially to explicate NFP's effectiveness. This paper provides evidence for the association of contraception with abortion, for the state of NFP among married couples in the United States, and gives examples of NFP centers that focus on women's health. This paper also presents evidence for the effectiveness of NFP in helping couples to avoid and achieve pregnancy. In light of the pope's call for universities to be involved with building a culture of life, this paper explains the Marquette University Institute for NFP as doing so through educating health care professionals in how to teach the Marquette Model system of NFP, by conducting NFP research, and by offering innovative NFP services. The paper ends echoing John Paul II's call for women to be leaders in developing a culture of life by discussing ways health care professional women have promoted NFP through social media, the internet, innovative technology, and women's health services.

IT IS NOW TWENTY-FIVE YEARS since Pope Saint John Paul II wrote the encyclical *Evangelium Vitae*, in which he discussed the value and dignity of all human life. Of interest to health care professionals and others involved with Natural Family Planning (NFP) is that the encyclical addresses the issues of abortion, contraception, and NFP.¹ It provides an analysis of the

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¹ John Paul II, *Evangelium vitae* (March 25, 1995), hereafter: EV.

abortion-contraception connection and makes clear that they are fruits of the same tree.² The pope said that the close connection between the practices of contraception and abortion is becoming more evident with increasing understanding of the workings of chemical products, intrauterine devices and vaccines that really act as abortifacients, various techniques of artificial reproduction that cause or lead to the practice of destroying embryos by selective abortion, and prenatal diagnosis that leads to eugenic abortion.³

The pope also pointed out that procreation (among contracepting couples) often becomes the “enemy” to be avoided in sexual activity. If the child is welcomed, he says, it is only because it expresses a desire or intention to have a child “at all costs” and not because it signifies the complete acceptance of the other and thereby an openness to the richness of life that the child represents.⁴ He made it clear that it is morally unacceptable to encourage (let alone impose) the use of methods such as contraception, sterilization, and abortion in order to regulate births.

The pope said that the moral law obliges couples in every case to control the impulses of instinct and passion and to respect the biological laws inscribed within them. It is precisely this respect that makes legitimate the use of natural methods of regulating fertility at the service of responsible procreation.⁵ He also mentioned the effectiveness of NFP methods when he stated that an honest appraisal of their effectiveness should dispel certain prejudices that are still widely held. The verification of effectiveness should convince married couples as well as health care and social workers of the importance of proper training in this area.⁶ He also expressed the gratitude of the church to those who, with personal sacrifice and often unacknowledged dedication, devote themselves to the study and spread of these methods as well to the promotion of education in the moral values that they presuppose.

The pope indicates various ways to build a society that values a culture of life. Natural family planning is a key part of this building a culture of life. Centers for natural methods of regulating fertility should be promoted as a valuable help to responsible parenthood. In such centers individuals – especially children – can be recognized and respected in their own right, and

² EV §13.

³ EV §14.

⁴ EV §13, §23.

⁵ EV §88.

⁶ EV §96.

there can be guidance for making every decision as a sincere gift of self.⁷ In another section he points out that the work of educating in the service of life involves the training of married couples in responsible procreation.⁸ He insists that a specific contribution to the culture of life should come from universities, particularly from Catholic universities, and from centers and institutes.⁹

The purpose of paper is to analyze the state of NFP among Catholic couples in the United States in light of *Evangelium vitae* by (1) providing evidence for the association of contraception and abortion, (2) describing the use of NFP use among Catholics since 1995, (3) describing how Catholic universities are involved with building a culture of life through educating health professionals as providers of NFP, and (4) giving hope for the future in building a culture of life through NFP.

1. Evidence for the Association of Contraception and Abortion: Abortion and Contraception Fruits of the Same Tree

Although John Paul II calls abortion and contraception fruits of the same tree, he makes it clear that they are violations of two different commandments and are opposed to different virtues.¹⁰ The use of contraception in marriage “contradicts the full truth of the sexual act at the proper expression of conjugal love...and is opposed to the virtue of chastity.”¹¹ In this context, he notes the use of NFP within marriage can help couples to maintain the proper expression of conjugal love. Abortion, on the other hand, is opposed to the virtue of justice and violates the commandment against killing the innocent. Both contraception and abortion are rooted in our hedonistic society and the unwillingness to accept self-responsibility in matters of human sexuality. Both show a self-centered concept of freedom that regards procreation as an obstacle to personal fulfillment.

In this perspective fertility is the enemy to be avoided through contraception, whether by blocking it with condoms, suppressing it with chemicals, or destroying it through sterilization. If these methods do not work, individuals feel that they still have the option of abortion. Is there evidence for these connections? There is scholarly evidence for saying that about 54% of the

⁷ EV §88.

⁸ Ibid.

⁹ EV §98.

¹⁰ EV §13.

¹¹ Ibid.

women in the United States who use contraceptive methods stop using them out of dissatisfaction with them as their family planning method.¹² When they then become pregnant without intending to do so, they often seek abortion as a result. Studies in Spain have shown that as the use of contraception goes up, so do abortion rates.¹³ A number of similar studies have shown that there is an association between the use of contraception and abortion.¹⁴

A 2011 study by this author found there were greater odds of ever having an abortion (up to three times the odds) among women who used the pill, condom, and or hormonal injections compared with women not using those methods.¹⁵ The same study also reveals that there were greater odds of having an abortion in the prior twelve months among women using sterilization, emergency contraception, or withdrawal as compared with women not using those methods.

A more recent study by this author showed the ever-use of contraceptive methods increased the odds of abortion from 56% to more than 1000%.¹⁶ The study also showed that frequent church attendance and holding religion to be

¹² R.K. Jones, J.E. Darroch, and S.K. Henshaw, "Contraceptive Use among U.S. Women Having Abortions in 2000–2001," *Perspectives on Sexual and Reproductive Health* 34 (2002): 294–303.

¹³ J.L. Dueñas, I. Lete, and R. Bermejo, et al., "Trends in the Use of Contraceptive Methods and Voluntary Interruption of Pregnancy in the Spanish Population during 1997-2007," *Contraception* 83 (2011): 82-87.

¹⁴ C. Marston and J. Cleland, "Relationships between Contraception and Abortion: A Review of the Evidence," *International Family Planning Perspectives* 29 (2003): 1-12; A. Glasier, K. Fairhurst, and S. Wyke, et al., "Advanced Provision of Emergency Contraception Does Not Reduce Abortion Rates," *Contraception* 69 (2004): 361-66; X. Hu, L. Cheng, X. Jua, and A. Glasier, "Advanced Provision of Emergency Contraception to Postnatal Women in China Makes No Difference in Abortion Rates: A Randomized Controlled Trial," *Contraception* 72 (2005): 111-16; J. Trussell, E.B. Schwartz, K. Guthrie, and E. Raymond, "No Such Thing as an Easy (or EC) Fix," *Contraception* 78 (2008): 351-354; C.B. Polis, E.G. Raymond, and J. Trussell, "Facing the Facts on Advance Provision of Emergency Contraception," *Contraception* 82 (2010);:579-80.

¹⁵ R. Fehring, "The Influence of Contraception on Abortion among Women of Reproductive Age in the United States," *Life and Learning XXI: Proceedings of the Twenty-First (2011) Conference of University Faculty for Life*, ed. J. Koterski, S.J. (Bronx NY: UFL, 2018), pp. 245-61.

¹⁶ R. Fehring, "The Influence of Religiosity and Contraception on the Likelihood of Abortion among Reproductive Age Women," *Life and Learning XXIX: Proceedings of the 29th University Faculty for Life Conference*, ed. J. Koterski, S.J. (Bronx NY: UFL, 2019), pp. 205-21.

very important in one's life decreased the likelihood of abortion compared to the rates for women who were not religious and not on any of the three methods of contraception. The study's recommendations included supporting traditional religiosity that supports chastity, marriage, and family planning methods that integrate human sexuality. The data for this study was taken from the 2010-2013 Cycle 8 of the CDC National Survey of Family Growth. This cycle of the NSFG was conducted by scientists at the University of Michigan using a nationally representative, randomly selected sample of U.S. women.

This paper analyzes data from the most recent NSFG data set (2015 to 2017) that included 5,554 women with a mean age of 31.02 years (range 15–50), 33% of whom were married, 11% cohabitating, 9.2% divorced, and 53.4% never married. The majority (49.5%) listed themselves as White, 24.4% as Black, 21% as Hispanic, and 11% as other. Some 49% listed their religion as Protestant, 20% as Catholic, 8.3% as of other religions, and 23% as having no religion. The purpose of this analysis was to determine the odds of having had an abortion, with ever-use of the hormonal pill, ever-use of condoms, female sterilization, male partner's vasectomy, or emergency contraception. It also investigated two protective factors, i.e., frequent church attendance at least once a week or more and the importance of religion for the participant.

The data showed there was greater odds of ever having an abortion among women who ever-used any of the three most common methods of birth control from 58% to 300% (see Table 1). There were significantly greater odds of having had an abortion among women who ever-used the hormonal pill or condoms but not for sterilization (male and female). The greatest odds were found in those women who ever-used emergency contraception, i.e., 200% greater odds compared with women who never used EC. Those who reported frequent church attendance and a feeling that religion was important in their lives showed lower odds of ever having an abortion (from 43% to 46%).

These results are consistent with past studies and data from NSFG data sets. The results also support the proposition in *Evangelium vitae* that there is a connection between use of contraception and abortion. What is interesting about the 2015-2017 results are that the less effective means of birth control (i.e., condom use and emergency contraception use) have higher odds of ever having an abortion. There were a number of studies in various countries and counties where emergency conception was heavily advertised and distributed; the studies for these regions showed no decrease in abortion rates.¹⁷ Other

¹⁷ A. Glasier, K. Fairhurst, and S. Wyke, et al., "Advanced Provision of

studies have shown that emergency contraception is actually not very effective.¹⁸ The result is that the unintended pregnancies that result have greater odds of being aborted. The importance of religion and frequent church attendance continues to give evidence of being associated with less odds of abortion. The data set also shows that the respondents who reported no religion are now more numerous than Catholics.

Table 1: Odds and 95% Confident Intervals of Abortion by Contraceptive Method and Religiosity¹⁹

Data from the 2015-2017 National Survey of Family Growth

Method	Odds Ratios	95% CI	Significance
Pill	1.58	1.26 – 1.99	< .001
Condom	1.94	1.27 – 2.97	< .002
Tubes Tied	0.84	0.68 – 1.04	< .144
Vasectomy	1.34	1.05 – 1.52	< .013
Emergency	2.93	2.42 – 3.56	< .001

Emergency Contraception Does Not Reduce Abortion Rates,” *Contraception* 69 (2004): 361-66; X. Hu, L. Cheng, X. Jua, and A. Glasier, “Advanced Provision of Emergency Contraception to Postnatal Women in China Makes No Difference in Abortion Rates: A Randomized Controlled Trial,” *Contraception* 72 (2005): 111-16; J. Trussell, E.B. Schwartz, K. Guthrie, and E. Raymond, “No Such Thing as an Easy (or EC) Fix,” *Contraception* 78 (2008): 351-354; C.B. Polis, E.G. Raymond, and J. Trussell, “Facing the Facts on Advance Provision of Emergency Contraception,” *Contraception* 82 (2010): 579-80.

¹⁸ Ibid.

¹⁹ The 95% Confident Interval (CI) means that the actual odds ratio number will fall within the two numbers provided 95% of the time, but 5% of the time it will fall outside of that range. That 5% error is an acceptable rate of error for standard scientific statistics and research.

Pill			
Importance of Religion	0.54	0.65 – 0.89	< .001
Church Attendance	0.57	0.41 – 0.80	< .001

2. Use of NFP among Catholic Couples since 1995

Evangelium vitae describes various ways to help build a culture of life. One suggestion is to promote the development of centers for the provision of NFP services.²⁰ The pope also mentions that all couples going through marriage preparation and counseling should be informed of the connection between love and life.²¹ He also calls on health care professionals, doctors, and nurses to be on the front line in providing and promoting these services.²²

Evangelium vitae was written and published twenty-five years ago. Thus it is of interest to ask whether the promotion of NFP in this document has had any influence on its use. To do this, tracking the rates of contraception and NFP use since 1995 with the NSFG data sets would provide a good picture of usage among reproductive-age women and couples in the United States. The NSFG was developed with the purpose of tracking contraception use and related topics since 1972. At first the data sets included only married women of reproductive age. In 1982 the list included unmarried women since by that time society experienced the widespread use of contraception and cohabitation among the unmarried.

In 1973 and 1982 the Center for Disease Control (CDC) reported that 3.4% (about 924,000) of U.S. married reproductive-age women between 15 and 44 were using natural methods, i.e., rhythm, BBT, and mucus methods or what they called at that time “periodic abstinence” methods. About 8% of married Catholic couples were using periodic abstinence in both 1973 and 1982. In the year of *Evangelium vitae*’s publication (1995) the rate of natural methods usage declined to about 2.3% and 2.8% among all married couples and married Catholic couples of reproductive age, respectively. Current rates of periodic abstinence (derived from the most recent 2015-2017 data set) declined to 1.3% and 2.3% (respectively) for all married couples and Catholic married couples. Furthermore, the number of women using modern NFP methods (i.e., mucus or temperature methods) was only about 0.5%. Sad to say, sterilization (both male and female) from 1982 has been the dominant method of family planning. Both non-Catholic and Catholic couples felt a need to destroy their fertility for

²⁰ EV §88.

²¹ EV §88, §96.

²² EV §89.

family planning purposes. See tables two and three.

Table Two: Use of Contraceptive Methods by All U.S. Married Couples: 1973 – 2017

Method	1973	1982	1995	2010	2017
Pill	25.1	13.4	15.6	14.7	10.7
Sterilization	16.4	29.5	37.0	29.1	30.5
Condom	9.4	9.8	13.3	13.5	12.0
PA	3.4	3.2	2.3	1.5	1.3

Table Three: Use of Contraceptive Methods and NFP among U.S. Married Catholic Women: 1973 – 2017

Method	1973	1982	1995	2010	2017
Pill	34.3	17.2	18.9	15.2	9.5
Sterilization	19.0	35.2	24.9	25.9	28.4
Condom	15.5	19.4	17.0	14.6	12.7
PA	8.3	8.2	2.8	2.5	2.0

Based on the trends in data from the NSDG from 1972 to 2017, it seems that the sexual revolution and what the pope called the hedonistic culture has won out. There is widespread use of contraception by married and unmarried alike, sterilization is the primary method of family planning, cohabitation is common, and the use of modern NFP just trickles along at an almost insignificant rate. As a result, most Western countries have a fertility rate that is well below replacement-levels. The culture of death has embraced the U.S. and the whole Western world. At times it seems that building a culture of life is a hopeless goal.

3. *The Role of Catholic Universities in Building the Culture of Life: The Marquette Experience*

A main concern of *Evangelium vitae* was building a culture of life through the implementation of long-term practical projects and initiatives inspired by the Gospel. The Holy Father indicates that a unique responsibility belongs to health care personnel: doctors, pharmacist, and nurses.²³ He also called on

²³ EV §89.

intellectuals to build a new culture and issued a special challenge to Catholic intellectuals. They are called to be present and active in the leading centers where culture is formed, in schools and universities.²⁴ A specific contribution will have to come from universities, particularly from Catholic universities, centers, and institutes. The following are some examples of faculty at Catholic and other universities that are dedicated to building a culture of life through NFP even though the obstacles are immense.

Faculty and professional nurses at Marquette University College of Nursing (Milwaukee, Wisconsin) have been offering professional services in natural family planning since 1985. In 1998, an Institute for Natural Family Planning was established at Marquette for the purpose of providing professional education, research, and service in natural family planning. In 1999, a new method of NFP (called the Marquette Model) was developed and launched. This method entails the integration of electronic hormonal fertility monitoring along with traditional natural markers of fertility.

In the early 1980s, some faculty members at Marquette University College of Nursing had the intention of starting a natural family planning training program for professional nurses. A number of models of NFP were explored for this purpose including the Billings Ovulation Method and the Creighton Model System of NFP. We chose the Creighton Model System for Marquette since it was highly developed and structured. We started offering these NFP services at Marquette University and at area Catholic Hospitals in 1984 and we conducted an effectiveness study of it.²⁵

But when we started to develop the Creighton Model courses for college credits and present the proposed curriculum to the College of Nursing curriculum committee, we found that this system of NFP and the teacher training program would not work at Marquette University. The main reason for developing a new method of NFP was to provide a way for the faculty and staff at Marquette University to have flexibility in developing and researching our own system of NFP. In addition we needed to develop a NFP teacher-training program for health care professionals in which the courses fit within the University system.

Based on a recommendation from Michael Zinaman, M.D., a reproductive endocrinologist from Loyola University School of Medicine, the Marquette University faculty decided to develop a system of NFP that integrated the new technology of the Clearblue Easy Fertility Monitor (CBFM) with a traditional

²⁴ EV §98.

²⁵ R. Fehring, D. Lawrence, and C. Philpot, "Use-effectiveness of the Creighton Model Ovulation Method of Natural Family Planning," *Journal of Obstetric, Gynecologic & Neonatal Nursing* 23/4 (1994): 303-09.

mucus-only method. The CBFM measures urinary reproductive hormones (estrogen and LH) and provides an objective estimate of the fertile window of the menstrual cycle. Clinicians and researchers from Marquette and other Universities, and some master NFP providers met to develop a new system of NFP called the Marquette Model.

The next step was to develop a Marquette Model teacher training program and have the courses approved by faculty at the College of Nursing and at the University level. Since the Marquette University College of Nursing is a professional school, we only intended to offer the Marquette University NFP teacher training program for health care professionals, i.e., professional nurses, physicians, certified nurse midwives, nurse practitioners, and physician assistants. We currently offer a NFP theory course and a NFP Teacher Training practicum course. In the year 2000 we placed both courses in an online platform and now offer the courses only online. In 2013 we developed and began to offer an online NFP medical application course as well. What is essential about a new system of NFP is that it is not only effective in helping couples to avoid and achieve pregnancy but that it is also effective during reproductive transitions, like the postpartum transition to fertility and the perimenopause transition to cessation of fertility.

Evidence for the Effectiveness of the Marquette Method(s) of NFP

John Paul II mentions the topic of effectiveness of NFP methods when he states that an “honest appraisal” of their effectiveness should dispel certain prejudices which are still widely held, and should convince married couples, as well as health care and social workers, of the importance of proper training in this area.²⁶ We have conducted numerous studies to evaluate the effectiveness of the Marquette Method in avoiding pregnancy for women at different reproductive stages. We conducted a number of cohort studies among women with regular ovulatory menstrual cycles.²⁷ We also conducted a comparison effectiveness study of the Marquette Method NFP with a mucus-

²⁶ EV §97.

²⁷ R. Fehring, M. Schneider, and K. Raviele, “Efficacy of Hormonal Fertility Monitoring as a Method of Natural Family Planning,” *Journal of Obstetric, Gynecologic & Neonatal Nursing* 36 (2007): 152-60; R. Fehring, M. Schneider, and M. Barron, “Retrospective Efficacy of the Marquette Model of Natural Family Planning,” *The American Journal of Maternal Child Nursing* 33 (2008): 348-54; R. Fehring, M. Schneider, K. Raviele. “Pilot Evaluation of an Internet-based Natural Family Planning Education and Service Program,” *Journal of Obstetrics, Gynecology, and Neonatal Nursing* 40 (2011): 281-91; R. Fehring and M. Schneider, “Extended Effectiveness of an Online Natural Family Planning Service Program,” *MCN The American Journal of Maternal Child Nursing* 42 (2017): 43-49.

based method²⁸ and the first randomized comparison NFP study since 1980, comparing a hormonal monitor with mucus monitoring.²⁹

One of the biggest challenges with tracking fertility among reproductive age women with NFP methods is during reproductive transitions such as during the postpartum transition to fertility and the peri-menopause transition to menopause and the end of fertility. In 2005 we developed a special protocol for tracking fertility during the postpartum³⁰ and in 2013 published a cohort study to test this protocol among postpartum women.³¹ We also published an effectiveness study of the Marquette Method of NFP during the perimenopausal transition³² and a study to determine the effectiveness of the Marquette Method in helping couples achieve pregnancy.³³ A systematic review of NFP studies published in a high level obstetrics and gynecological journal rated the Marquette Method as one of the most effective systems of NFP.³⁴

There are two effectiveness numbers provided for any method of family planning, i.e., correct or perfect use of the method and typical or average use when methods are not used consistently or according to instructions. The correct use effectiveness of the Marquette Method ranges from 0 to 2 per 100 women over 12 months of use and the typical effectiveness rate from 4 to 13 per 100 women over 12 months of use. In Table Five are the most recent studies of effectiveness and efficacy for the Marquette Method. The studies from 2013 are studies using the most recent protocols and algorithms of the

²⁸ R. Fehring, M. Schneider, M.L. Barron, and K. Raviele, "Cohort Comparison of Two Fertility Awareness Methods of Family Planning," *Journal of Reproductive Medicine* 54 (2009): 165-70.

²⁹ R. Fehring, M. Schneider, K. Raviele, D. Rodriguez, and J. Pruszynski, "Randomized Comparison of Two Internet-Supported Fertility Awareness Based Methods of Family Planning," *Contraception* 88 (2013): 24-30.

³⁰ R. Fehring, M. Schneider, and M. Barron, "Protocol for Determining Fertility While Breast-Feeding," *Fertility and Sterility* 84(2005): 805-07.

³¹ T. Bouchard, M. Schneider, and R. Fehring, "Efficacy of a New Postpartum Transition Protocol for Avoiding Pregnancy," *Journal of the American Board of Family Medicine* 26 (2013): 35-44.

³² R. Fehring, and Q. Mu, "Cohort Efficacy Study of Natural Family Planning among Perimenopause Age Women," *Journal of Obstetrics, Gynecology, and Neonatal Nursing* 43 (2014): 351-58.

³³ T. Bouchard, M. Schneider, and R. Fehring, "Efficacy of a New Postpartum Transition Protocol for Avoiding Pregnancy," *Journal of the American Board of Family Medicine* 26 (2013): 35-44.

³⁴ R. P. Urrutia, C.B. Polis, E. T. Jensen, M. E. Greene, E. Kennedy, and J.B. Stanford, "Effectiveness of Fertility Awareness-Based Methods for Pregnancy Prevention: A Systematic Review," *Obstetrics & Gynecology* 132 (2018): 591-604.

Marquette Method.

One of the Catholic universities in the United States that had a great impact on NFP is Georgetown University. Its School of Medicine received a large multi-million dollar grant from the U.S. Aid for International Development and the World Health Organization to start the Institute for International Studies in Natural Family Planning (which was re-named the Institute for Reproductive Health in the 1990s). This institute has a large staff and a group of scientists to interact with various world-wide population and family planning organizations in promoting what they call fertility awareness based methods (FABM). These are methods of family planning that recommend the use of condoms or withdrawal during the estimated fertile phase. The IRH was responsible for developing and studying newer FABM, i.e., a fixed calendar based method called the Standard Days Method and a simple form of the mucus only method called the TwoDay method.³⁵

Table Five: Perfect and Typical Use Unintended Pregnancy Rates per 100 Women Over 12 Months of Use with the Marquette System of NFP

Study	NFP Method	Indicators	Length*	Perfect	Typical
Fehring et al. (2007)	Marquette (MM)	Mucus/Monitor	(21-42) 2	2	13
Fehring et al. (2008)	MM	Mucus/Temp/LH	(21-42)	1	11
Fehring et al. (2009)	MM vs CrM	Mucus/Monitor	(21-42) 2	12/23	
Fehring et al. (2011)	MM	Mucus/Monitor	(21-42) 2	2	9
Fehring et al. (2013)	MM	Monitor/Mucus	(21-42)0	7/19	

³⁵ M. Arevalo, V. Jennings, and I. Sinai, "Efficacy of a New Method of Family Planning: the Standard Day Method," *Contraception* 65 (2002): 333-338.; See M. Arevalo, V. Jennings, M. Nikula, and I. Sinai, "Efficacy of the New TwoDay Method of Family Planning," *Fertility and Sterility* 82 (2004): 885-892.

Bouchard et al. (2013)	MM Postpartum	Monitor	Variable 2	12
Fehring et al. (2014)	MM Perimenopause	Monitor/ Mucus	Variable 1.5	5
Fehring et al. (2017)	MM	Monitor/ + Mucus	Variable 1.6	4/7

* Range of length of menstrual cycles in study.

Mary Lee Barron at St. Louis University was one of the early developers of the Marquette Method and has collaborated in research studies on it (and in particular, studies on the breastfeeding transition).³⁶ She developed a NFP education clinic at Saint Louis University. Another Catholic physician involved with the early development of the Marquette Method and other effectiveness studies is Kathleen Raviele, M.D., the first female president of the Catholic Medical Association.³⁷ More recently, Dr. Thomas Bouchard (a family medicine physician associated with the University of Calgary and past president of the Canadian Federation of Catholic Physicians) became a Marquette Method provider and has conducted a number of effectiveness studies with other scientists at the Marquette University NFP Institute.³⁸

³⁶ M. L. Barron and R. Fehring, "Basal Body Temperature Recording: A Useful Recommendation to Couples Seeking Pregnancy?" *Journal of Maternal Child Nursing*, 30(5) (2005): 290-296.; R. Fehring and M. Schneider and M. Barron, "Protocol for Determining Fertility While Breast-Feeding," *Fertility and Sterility* 84(3) (2005): 805-807.

³⁷ R. Fehring, M. Schneider and K. Raviele, "Efficacy of Hormonal Fertility Monitoring as a Method of Natural Family Planning," *Journal of Obstetric, Gynecologic & Neonatal Nursing* 36/2 (2007):152-60; R. Fehring, M. Schneider and K. Raviele, "Pilot Evaluation of an Internet-based Natural Family Planning Education and Service Program," *Journal of Obstetrics, Gynecology, and Neonatal Nursing* 40(3) (2011): 281-91; R. Fehring, M. Schneider, K. Raviele, D. Rodriguez, and J. Pruszynski, "Randomized Comparison of Two Internet-Supported Fertility Awareness Based Methods of Family Planning," *Contraception* 88/1 (2013): 24-30.

³⁸ T. Bouchard, M. Schneider, and R. Fehring, "Efficacy of a New Postpartum Transition Protocol for Avoiding Pregnancy," *Journal of the American Board of Family Medicine* 26 (2013): 35-44; Thomas P. Bouchard, Richard J. Fehring, and Mary M. Schneider, "Achieving Pregnancy Using Primary Care Interventions to Identify the Fertile Window," *Frontiers in Medicine* 4 (January 2018): 250.

Another researcher is Paul Yong, M.D., an assistant professor at the University of British Columbia School of Medicine, and an expert in the treatment of endometriosis.

At this time, the Georgetown University IRH is not active in NFP research or in training health professionals in providing NFP services. However, Marguerite Duane, M.D., clinical professor of family medicine, offers a selective course in NFP methods for medical students. Joseph Stanford, M.D., a professor of family medicine at the University of Utah, is an active NFP researcher and is the director of a women's health fellowship program; the university, however, does not have a NFP teacher training program for health professional. One of the most active NFP teacher training programs in the U.S. is the Pope Paul VI Institute program. Although this institute offers continuing medical education credits through Creighton University, it is not part of the University. The Marquette University NFP teacher training program for health care professionals appears to be the only one in the United States, and maybe the world, that is part of a Catholic or secular university. The lack of comparable programs at other institutions is evidence of the sad state of professional nursing and medicine, especially at Catholic schools of medicine and nursing in the United States.

4. Hope for the Future

There are signs of hope for building the culture of life through the promotion and practice of NFP. This section briefly addresses the application of the internet and mobile cell phone applications (apps) for providing NFP and health care information, new fertility monitoring technology, and the influence of the menstrual cycle as a vital sign for women's health.

Use of Internet and Cell Phone Apps for Providing NFP

Social networking is one of the main communication modes for young women. Social networking that focuses on young women's health through the menstrual cycle can be a powerful tool to promote health and to identify early symptoms that might indicate health problems. This tool can be especially useful when it is linked to health professionals such as physicians and advanced practice professional nurses who specialize in providing methods of NFP.

According to the National Center for Health Statistics, women of reproductive age access health information on the Internet more than men.³⁹

³⁹ R. A. Cohen and B. Stussman, "Health Information Technology Use among Men and Women Aged 18-64: Early Release of Estimates from the National Health Interview Survey, January-June, 2009," *National Center For Health Statistics, Health e-Stats* (February, 2010).

The Internet is the number one source of information for women's health and for problems with one's menstrual cycle and related problems.⁴⁰ Menstrual cycle tracking apps are the fourth most used health app among adults and the most frequent among adolescents.⁴¹ There are, however, not many NFP systems that have a web-based menstrual cycle monitoring system that is synced to a cell phone mobile app that provides easy access to menstrual cycle monitoring, a social network, and professional support.

In 2008, the Marquette University Institute for NFP launched a Web site program to teach couples the Marquette Model of NFP online and to provide online consultation, i.e., to provide ease of access for couples across the United States, was launched.⁴² This program is in the English and Spanish languages. This online site (<http://nfp.marquette.edu>) includes information on NFP, user forums, a menstrual cycle charting systems, protocols for special reproductive circumstances (e.g., monitoring fertility during the postpartum breastfeeding transition), and online support from professional nurses and physicians. The online system of the Marquette Method now has over 10,600 women/couples who have registered on the site. Up until May of 2015, these services were provided free of charge, even though they required thirty minutes to three hours per day of professional consultation.

The Marquette NFP website system also facilitated studies to determine the effectiveness of special protocols for postpartum women,⁴³ effectiveness to avoid pregnancy among women transitioning through perimenopause,⁴⁴ and the effects of focused intercourse during the estimated fertile window with couples wishing to achieve pregnancy.⁴⁵ In addition, the web site facilitated the

⁴⁰ L. A. Kahlar and M. Mackert, "Perception of Infertility Information and Support Sources Among Female Patients who Access the Internet," *Fertility and Sterility* 91 (2009): 83-90.

⁴¹ R. A. Cohen and B. Stussman, "Health Information Technology use Among Men and Women Aged 18-64: Early Release of Estimates from the National Health Interview Survey.

⁴² R. Fehring, M. Schneider, and K. Raviele, "Pilot Evaluation of an Internet-Based Natural Family Planning Education and Service Program," *Journal of Obstetrics, Gynecology, and Neonatal Nursing* 40/3 (2011): 281-91.

⁴³ T. Bouchard, M. Schneider, and R. Fehring, "Efficacy of a New Postpartum Transition Protocol for Avoiding Pregnancy," *Journal of the American Board of Family Medicine* 26 (2013): 35-44.

⁴⁴ R. Fehring, and Q. Mu, "Cohort Efficacy Study of Natural Family Planning among Perimenopause Age Women," *Journal of Obstetrics, Gynecology, and neonatal Nursing* 43/3 (2014): 351-58.

⁴⁵ Q. Mu and R. Fehring, "Efficacy of Achieving Pregnancy with Fertility focused Intercourse," *MCN The American Journal of Maternal Child Nursing* 39/1 (2014): 35-

provision of women's health beyond family planning in that the professional nurses managing the website and their physician consultants (through the user forums) answer many related health questions (e.g., assessing and managing polycystic ovarian syndrome and unusual uterine bleeding) with (as of July, 2020) over 45,000 posts. In essence, these studies demonstrated that the online NFP website was an effective system of providing women's health care and the use of the menstrual cycle as a vital sign.

There are many other websites and NFP learning systems that have some combination of online existence, consultation, charting systems, and fertility monitoring apps, for example, the Sensiplan system in Germany and Europe.⁴⁶ The biggest changes in the last five years or so came with the mobile fertility monitoring application systems and especially those that are either very simple to use and/or are "blue toothed" to a cell phone. Some (like the Glow fertility monitoring app program) is connected to fertility clinics that provide IVF. Other systems like NaturalCycles was developed by Swedish researchers that included the ability to record BBT and results from luteinizing hormone (LH) urine test kits. According to the NaturalCycles website, they have sold over 700,000 units in 200 countries (<https://www.naturalcycles.com/en>).⁴⁷ They received European certification of the device for contraceptive use that is similar to the condom.

Fertility indicators, mobile applications for smart phones, and internet access have also been responsible for the increased use of FABM and NFP among younger U.S. women (aged 20-24), as indicated in recent NSFG studies.⁴⁸ According to German researchers, knowledge of fertility indicators and symptoms in the women's cycle has increased dramatically in recent decades.⁴⁹ If someone wants to use this knowledge, it is all too understandable

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⁴⁶ Elizabeth Raith-Paula, Petra Frank-Herrmann, Gunter Freundl, and Thomas Stowitzki, *Natürliche Familienplanung heute (Natural Family Planning Today)*, 4th edition (Heidelberg, Germany: Springer, 2008), p. 13.

⁴⁷ E. B. Scherwitzl, A. L. Hirschberg, and R. Scherwitzl, "Identification and Prediction of the Fertile Window Using NaturalCycles," *The European Journal of Contraception and Reproductive Health Care* 20/5 (2015): 403-08; E. B. Scherwitzl, K. G. Daielsson, J. A. Sellberg, and R. Scherwitzl, "Fertility Awareness-based Mobile Application for Contraception," *The European Journal of Contraception & Reproductive Health Care* 21/3 (2016): 234-41, website <https://www.naturalcycles.com/en> accessed July 12, 2020.

⁴⁸ M. L. Kavanaugh, and J. Jerman, "Contraceptive Method Use in the United States: Trends and Characteristics Between 2008, 2012, and 2014," *Contraception* 97 (2018): 14-21.

⁴⁹ G. Freundl, C. Gnoth, and M. Krahlisch, "Zykluscomputer und -Apps,"

in the age of personal computers and smartphones that she will consult resources that make her daily work easier, especially in regards to the daily charting of fertility symptoms. This new technology can help women to make life as favorable and natural as possible. It gives assurances in family planning, in daily life together and in sex, whereby even with the use of the most modern technologies, one must always take into account the wishes of partners.

NFP, Women's Health, and Monitoring the Menstrual Cycle as a Vital Sign

In *Evangelium vitae* John Paul II proclaimed that in developing a culture of life, women play a unique and decisive role.⁵⁰ He said that it depended on them to proclaim a new feminism that is not based on a male dominant view of women and women's health. Most NFP providers are women and are leaders in that role. The view of NFP is that fertility is not a disease and should not be treated that way. Through NFP there also has been a new interest in the value of the charting of the menstrual cycle for health reasons.

Because significant women's health problems are manifested as changes in the parameters of the menstrual cycle, the subcommittees of both the American Academy of Pediatrics and American College of Obstetricians and Gynecologists have recommended monitoring the menstrual cycle as a vital sign for adolescents and young adults.⁵¹ Others have recommended that women of all reproductive ages monitor their menstrual cycle for potential health problems.⁵² Menstrual cycle charting for women of all reproductive ages can indicate early hints of menstrual cycle pathologies and can help women identify lifestyle characteristics and health problems in early phases that may predispose them to serious pathologies in the future.

Menstrual cycle charting systems that include information on menses, ovulation, phases of the cycle, and unusual uterine bleeding could be useful in the detection, prediction, diagnoses, and treatment of health problems. The

Gynäkologische Endokrinologie 14/2 (2016): 1-11.

⁵⁰ EV §99.

⁵¹ American Academy of Pediatrics and American College of Obstetricians and Gynecologists, "Menstruation in Girls and Adolescents: Using the Menstrual Cycle as a Vital Sign," *Pediatrics* 118 (2006): 2245-50.

⁵² P. Frank-Herrmann, C. Gnoth, S. Baur, T. Strowitzki, G. Freundl, "Determination of the Fertile Window: Reproductive Competence of Women--European Cycle Databases," *Gynecological Endocrinology* 20 (2005): 305-12; P. Vigil, F. Ceric, M.E. Cortez, and H. Klaus, "Usefulness of Monitoring Fertility From Menarche," *Journal of Pediatric Adolescent Gynecology* 18 (2006): 173-79; P. Vigil, C. Lyon, B. Flores, H. Rioseco, and F. Serrano, "Ovulation, a Sign of Health," *The Linacre Quarterly* 84/4 (2017): 343-55.

more known about normal and abnormal parameters of the menstrual cycle and related symptoms, the better health professionals can use this information to inform women about potential and actual health problems. Women who monitor their menstrual cycles with charting systems have a unique opportunity to contribute to this endeavor. Although there have been several recent studies that have described normal parameters of the menstrual cycle, there have been few studies that have provided information on patterns of menstrual parameters among young women and the association of these parameters with lifestyle and other signs of health problems.³⁰

Fertility health knowledge is a sub-concept of health knowledge. It includes information related to the fertility of men and women throughout their lives. Fertility knowledge has been increasingly recognized as a critical component that may impact people's sexual and reproductive behavior and outcomes.³² However, multiple studies have shown that fertility knowledge is generally inadequate and inaccurate among diverse populations from different countries.³³ A recent study of fertility health knowledge and fertility risk behaviors found that those women who practiced NFP had higher levels of fertility knowledge and lower risk behaviors that would damage their fertility.⁵³ Other studies show that those adolescents and young adults who are using contraception have higher sexually transmitted disease rates and behaviors that would indicate sexual health risks, e.g., early sexual debut, multiple sexual partners, compared with adolescents and young adults not on contraception.⁵⁴

Integrating Women's Health with NFP

With the realization that there is a lack of fertility knowledge among women and men, that the menstrual cycle is a vital sign of women's health, that use of hormonal contraception can mask important menstrual cycle symptoms, that use of hormonal contraception to treat health problems by suppressing the menstrual cycle rather than treating the causes, and that the use of hormonal contraception has health risks, there has been an increase of practices, clinics, and health centers that offer women's health services without providing contraception. Many, if not most, of these clinics are managed and staffed by

⁵³ Qiyang Mu, Lisa Hanson, James Hoelzle, Richard J. Fehring, "Young Women's Knowledge about Fertility and their Fertility Health Risk Factors," *Journal of Obstetric, Gynecologic & Neonatal Nursing* 48 (2019): 153-62.

⁵⁴ R. Fehring, T. Bouchard, and M. Meyer, "Influence of Contraception Use on the Reproductive Health of Adolescents and Young Adults," *The Linacre Quarterly* 85/2 (2018): 167-77; R. Fehring, "Influence of Current Contraceptive Use on the Abortion and Sexually Transmitted Disease Rates among Adolescents," *Life and Learning XXVII: Proceedings of the Twenty Seventh (2017) Conference of University Faculty for Life*, ed. J. Koterski (Bronx NY: UFL, 2018), pp. 211-31.

female health professionals. Examples include the Saint Gianna clinics, the NaProTech medical practices and what are called Fertility Care Centers of America. There are approximately 150 physicians and advanced practice nurses listed as providing NaProTech services.⁵⁵ There is also the recent development of Fertility Education & Medical Management (FEMM) clinics and healthcare providers.⁵⁶ FEMM advertises that it is a comprehensive women's health program that involves teaching women to understand their bodies and to recognize vital signs of health and to provide evidence-based medical protocols. FEMM also offers a training program so that health care professionals and others can teach the FEMM menstrual cycle tracking system and to train health professionals in the FEMM medical protocols.

Another positive effort is the Fertility Appreciation Collaborative to Teach the Sciences (FACTS), which is a group of physicians, health care professionals, and educators who work to provide information about NFP and FABM for the medical community.⁵⁷ FACTS is headed by a young family medicine physician, Marguerite Duane, M.D. FACTS's stated goal is to share the best evidence available for health care colleagues and students so they can "educate women and men about their fertility, empower them to make more informed choices about family planning, and enable women to collaborate with medical professionals to better monitor and manage their reproductive health." They accomplish this with webinars, presentations at conferences for health care professionals, conducting research, and promoting NFP and FABM among health care professionals.

The Marquette University Institute of NFP has educated numerous health care providers (primarily professional nurses, advanced practice nurses, and physicians) and enabled them to provide NFP and women's health services. The Institute has an online core theory course in NFP, a teacher training practice course, and a medical applications course. This past year (2019-2020) we have had over seventy new health care professional students. These health care professionals (primarily female, some male) have developed wonderful in-person and online NFP service programs (see <https://www.marquettemethod.com/>). They are reaching and teaching the Marquette Model of NFP to thousands of couples every year. These women are certainly reflective of the

⁵⁵ Fertility Care Centers of America (Web site accessed January 28, 2018): <https://fertilitycare.org/>.

⁵⁶ Fertility Education & Medical Management (accessed January 28, 2018): <https://femmhealth.org/>.

⁵⁷ Fertility Appreciation Collaborative to Teach the Sciences (accessed July 12, 2020): <http://www.factsaboutfertility.org/>.

new feminism that rejects contraception and abortion that John Paul II promotes in *Evangelium vitae*.

Summary

The internet, mobile apps, and social networking have changed society and as a result has had a profound effect on NFP and NFP systems. There is a revolution in online menstrual cycle charting systems, more refined biological indicators of fertility, NFP social networking groups, and integrative health care that includes NFP. The globalization of health, research, and the ability to gather large data sets have provided evidence that confirms the predictions and truths in the encyclical *Evangelium vitae* – especially in exposing the links between contraception and abortion as a result of a hedonistic society. Although the NSFG shows no growth in the use of NFP, there is some evidence there is more interest in use of NFP and FABM for avoiding and achieving pregnancy and the integration into women's health care. Finally, there is a growth in the numbers of health care providers (primarily women) who have and are developing and providing women's health through clinics and centers that integrate human fertility and the use of NFP.