Ewa Ślizień-Kuczapska, M.D
Department of Reproductive Health,
Centre of Postgraduate Medical Education, Warsaw, Poland
Saint Sophie Hospital Warsaw, Poland
Monika Żukowska-Rubik, M.D., PhD
Department of Reproductive Health,
Centre of Postgraduate Medical Education, Warsaw, Poland
Saint Sophie Hospital Warsaw, Poland
Centre for Lactation Science in Warsaw
Dorota Sys, Th.D
Department of Reproductive Health,
Centre of Postgraduate Medical Education, Warsaw, Poland
Saint Sophie Hospital Warsaw, Poland

For the sake of procreation health development. Medical and non-medical counseling in breastfeeding promotion as well as fertility return after labor

Abstract:
For the sake of procreation health development. Medical and non-medical counseling in breastfeeding promotion as well as fertility return after labor
The sake and care of family procreation health are the main priority of the state especially in the context of demographic winter lasting over 20 years and more in many European countries as well as in Poland. What is anxious and worrisome concern no consequences in between theoretical recommendations and ministerial laws as well as medical standards and its practical application. Doctors, nurses and midwifes are dedicated to promotion of breastfeeding and natural fertility return mechanism. Many research as well as practical experience of authors with mothers and families, clearly point to lack or at least not sufficient time, knowledge and proper procedures apply at lactation problems or lactation amenorrhea method (LAM). Despite many surveys showing evidence of many short and long lasting health benefits coming from exclusive breastfeeding during first 6 months after labor as well as LAM only 40 percent of mothers continue it after release from hospital and only 18% are informed about LAM during puerperal visit. We recommend the standard puerperal visit as well as team work at this special moment of family grow and development. Including non-medical, competent specialist in family care can bring extraordinary benefits to family and state support.

1. Introduction and purpose of this work

The development and care for the procreative health of the family constitute a genera tional continuity and are an important part of fertility disorders prevention. In Poland, for the last 25 years, there has been no simple replacement of generations,

and the fertility rate oscillates around 1.2 (GUS, 2017). In 2016, the Ministry of Health considered these issues in the National Health Programme (NPZ) for 2016-2020 (point 6)[1]. According to the definition of reproductive health included in the Comprehensive Health Protection Programme in Poland, preparation for parenthood, so among other things, promotion of breastfeeding and family planning after childbirth constitute an important part of it. The period of pregnancy and breastfeeding is part of the reproductive and procreation cycle of a woman. If a child is naturally conceived, one can conclude about the fertility and health of its parents. Because infertility, according to the modern definition, is not only a disease in social terms, as defined by the World Health Organization (WHO), but a complex chronic multifactorial process involving both parents, requiring multi-specialist treatment (Barczentewicz, 2008; Boyle, Stanford, 2011). Therefore, pregnancies and lactations can be treated as a health test of a woman - mother and a man - the child's father. The time from preparation to two-parenthood from conception (Fijałkowski, 1998), through pregnancy and birth, and breastfeeding, can and should be used to promote the development of procreative health of mother, father and their offspring, that is a family.

The aim of this work is a critical look at the implementation of selected recommendations and standards in the field of breastfeeding promotion and the knowledge about the return of fertility after childbirth. Greater involvement and individualization of recommendations and advice from health professionals such as doctors, midwives and nurses, physiotherapists, dieticians and people involved in non-medical family counseling, can help prevent family health disorders and promote good health-related behaviors, protecting health and promoting family development.

2. Selected legislation and recommendations for health professionals in the field of procreative health promotion

Facing the assumption that prevention is better than treatment, in 2005, the Polish Gynecological Society has developed recommendations for doctors in the field of prenatal care in a normal pregnancy course (*Recommendations* ... 2013) which at the current stage have not been updated. Furthermore, these obligations are specified in the Act on the profession of doctor and dentist, of December 5, 1996 (Journal of Laws,

[1] https://www.gov.pl/zdrowie/npz-2016-2020

1997, No. 28 item 152), defining the rules and conditions for exercising the profession. The Act referred to in art. 2, point 3 draws attention to the fact that conducting research work in the field of medical science or health promotion and teaching the profession of doctor is also considered exercising the profession of doctor.

In addition to doctors, also nurses and midwives are an extremely important and numerous professional group. On 1 January 2012, a new act of 15 July 2011 on the nurse and midwife professions came into force (Journal of Laws of 2011 No. 174, item 1039, hereinafter called "the new act"), which replaced the Act of July 5, 1996 on nurse and midwife professions (consolidated text: Journal of Laws of 2009 No. 151, item 1217, as amended). In chapter 2, art. 4, point 1 there is the following record: exercising the profession of a nurse consists in providing health services, including in the field of health education and health promotion. In turn, performing midwife's profession in accordance with art. 5, point 1 of the act, obliges to provide health services, including to conduct educational and health activities in the scope of: a) family life education, family planning methods, and protection of motherhood and fatherhood, b) preparation for parenthood and full preparation for childbirth, including counseling on hygiene and nutrition. In the New Charter of Health Care Professionals from 2017, you can read: "health professionals fulfill their service in the delicate matter of responsible procreation by engaging in the prevention and treatment of pathology that affects fertility." Since 2010, standards of perinatal care have been in force (amended in 2012 and 2017), which from 2019 will be modified especially in the promotion of feeding newborns with breast milk, if necessary, obtained from breast milk banks (*Journal of Laws* of 2016; item 1132).

Health diagnostics, dieticians, lactation and family counselors may and should also be involved in the promotion of health. With their knowledge and competencies they can supplement the urgent needs of young spouses with regard to the promotion of healthy parenting, proper preparation for it, and the successful development of the family.

3. Is Poland a country that supports breastfeeding?

Breastfeeding is a process that benefits the health of the mother and child. It is not only a way of feeding babies, but also a behavior assigned to all mammalian species. In the process of evolution, the milk of each mammal has been equipped to

best support the development of the young ones and ensure their survival under various environmental conditions. Human milk contains essential nutrients, but also a whole range of complex biologically active factors (Banaszkiewicz, 2017). Their task is to support the immature body of a child. A few hundred of them have already been detected, and new ones are still being discovered. And science is only learning about them and trying to understand their meaning. This is the case for stem cells of human milk (Hassiotou et al., 2014). In recent years, a lot has been said about probiotic in human milk containing bacteria which play a key role in shaping the correct microbiome in the gastrointestinal tract (Kwiecień, 2013, Fernandez et al., 2013). The richness of human milk translates into a significantly lower incidence of breastfed infants for infectious diarrhea, necrotizing enterocolitis, respiratory tract infections, ear infections and urinary tract infections while the children are breastfed. Health benefits are also observed at later stages of life - they involve lower incidence of type 1 and type 2 diabetes, non-Hodgkin lymphoma, lymphatic and myeloid leukemia, asthma or Crohn's disease.

In turn, mother breastfeeding and continuing it for the recommended time, in the short term, affect faster involution of the uterus and reduce blood loss (due to prolongation of the non-menstrual period), faster returning to the pre-pregnancy body, reducing the risk of postnatal depression. In the long-term perspective, it reduces the risk of breast and ovarian cancer, osteoporosis and hypertension, diabetes mellitus, hyperlipidemia during the post-menopausal period (Nehring-Gugulska, 2017). Breastfeeding is an ecological process, possible with a relatively low energy expenditure for the mother's body (when feeding one child, the mother needs about 500 kcal extra) and not leaving tons of used artificial milk packaging and bottle feeding accessories packaging. It is economical at the level of the family as well as the whole country due to the lower incidence of diseases in the society and the related lower costs of treatment, rehabilitation, and sick-leave.

Thus, the priority of each country should be to create a support system for mothers who want to breastfeed, so that the process can proceed smoothly. Successful breastfeeding is conditioned by multiple factors. Individual factors play an important role here - the knowledge and motivation of the mother herself, her sense of self-efficacy in breastfeeding, health and attitude towards her breastfeeding of the closest family - husband, mother, the attitude of her peers, work environment, as well as the atmosphere created by the media, marketing pressure of the artificial food for babies or, finally, the tradition of breastfeeding lack thereof in a given

country (Johnson et al., 2015). A very important role is also played by health care personnel who take care of the mother or child.

The provisions of the Polish law entrust the care for a woman during pregnancy and lactation and for a breastfed child in the physiological course, to midwives in maternity hospitals and community midwives. Pediatricians and family physicians have the task of supervising the child's feeding process and responding to irregular situations. Gynecologists - obstetricians and also family physicians should help mothers in cases of nipple pathology or the necessity of taking medicines (Journal of Laws of 1997 No. 28 item 152, Journal of Laws of 2011 No. 174, item 1039; Journal of Laws of 2016, item 1132). All mentioned health care workers should encourage mothers to breastfeeding and support them, to inform about its basic aspects. This is an important part of health promotion inscribed in the duties of each medical specialty.

In 2015 the Centre for Lactation Science (CNoL) began research diagnosing support during breastfeeding, which mothers get from the listed medical professionals. Mothers were asked about the basic aspects of this support through online surveys on the CNoL website and several organizations with a similar profile. The report "Is Poland a friendly country for a nursing mother and her child" in 2016 concerned support from pediatricians within the framework of basic health care, in wards where infants are hospitalized, and in workplace. The report in 2017 was focused on the care provided by midwives and gynecologists-obstetricians. In 2018, mothers were asked about lactation care provided by the midwives in maternity hospitals and family doctors, as well as lactation counselors. A total of over 15 thousand mothers took part in these studies[2].

The results of the tests carried out are not satisfactory. Mothers predominantly responded that pediatricians and family doctors did not encourage breastfeeding, did not provide knowledge about the benefits of breastfeeding and about basic rules of lactation (eg how long to breastfeed exclusively, how many times a child should be fed during the day). 13% of mothers confirmed they had a conversation about breastfeeding with a gynecologist during pregnancy, while 80% of mothers were asked if they breastfeed after the child was born, but only 1/3 of them were encouraged to continue breastfeeding and were asked if they had any difficulties. Most mothers, even if they could tell about their feeding problems, did not get advice

[2] The CNoL reports are accessible here:
http://kobiety.med.pl/cnol/index.php?option=com_content&view=article&id=153&Itemid=51&lang=pl

from doctors that made them feel more competent in feeding. The openness and interest of the doctor in the course of feeding is positively received by mothers and is the source of necessary support, unfortunately, not many mothers get that support. This is certainly in large part due to very limited time possibilities during medical visits, which is a problem pointed out in numerous publications (Taveras et al., 2004). Another barrier is, unfortunately, the lack of adequate training in the field of lactation during both studies and postgraduate training.

In every fourth mother, the gynecologist examined her breasts during a visit during pregnancy, only in 10% of the mothers the doctor examining breasts referred to the future breastfeeding. The neutral and not judging conversation between the doctor and the mother about her plans for breastfeeding is a signal to her that it is important. Many mothers decide about breastfeeding before conceiving or during pregnancy. The earlier the decision is made, the better the chance of succeeding. If, however, after the birth mothers take up feeding under the pressure of the medical staff, such decisions are impermanent (Sheehan et al., 2013). 54% of mothers confirmed that gynecologists talked to them about methods of contraception during breastfeeding, about 18% of mothers obtained from a doctor an explanation of what the LAM method is. At the puerperal visit only 15% of mothers had their breasts examined, and yet in this way many pathologies of the breast and nipple can be detected,and they can be remedied by preventing premature termination of breastfeeding. For comparison, only 43% of mothers reporting breast or nipple pain had their breasts examined by a family doctor. The most frequent recommendation for mothers reporting concerns about the amount of food was to give the child the mixture - this was recommended by 51% of family doctors and 46% of pediatricians. The indicators of effective feeding were much less frequently assessed, stimulation of lactation and supplementary feeding with maternal milk were recommended.

Midwives from maternity hospitals and community midwives are obliged to exercise basic lactation care, which includes encouraging and informing about the benefits of breastfeeding, recommendations and rules of conduct, instruction and correction of feeding techniques, assessment of effective feeding indicators, assistance in frequent and uncomplicated problems. Such care allows the mother and the child to build a satisfying feeding experience, to obtain maximum health benefits, and to prevent problems. The CNoL study showed that most mothers were encouraged to breastfeeding by midwives, and asked how they were doing. Over 60% of mothers received the correct recommendation to feed on demand at least 8-12

times a day. However, other important information - for example about the length of exclusive feeding, not giving pacifier during the stabilization of lactation, evaluation of suction efficiency and effective feeding indicators - were given only to minority of mothers (25-45%). About 40% of mothers in the wards described feeding instruction as cursory, 30% were satisfied with it. At patronage visits, 40% of mothers were asessed in the terms of latching on, only half of the mothers who did it incorrectly received help in correcting the abnormalities.

Just over 40% of mothers reporting insufficient milk supplay received advice to give the child modified milk. Evaluation of effective suckling indicators, suckling efficiency were made in low percentages, and these are the basic steps to diagnose the cause of difficulty, and often to exclude perceived low milk supplay. Basic interventions in such situations were also applied in low percentages - increasing the frequency of breastfeeding, expression of breastmilk and giving it to the child. While the majority of mothers received the correct advice on how to deal with breast fullness, in the case of painful or cracked nipples, mainly ineffective or risky ways were proposed (nipple creams, breast shells). But the breasfeeding technique was not corrected, i.e. no basic intervention was performed. Half of the mothers leaving the hospital did not feel competent in breasfeeding and needed additional help.

Subsequent reports "Is Poland a friendly country for a nursing mother and her child" unfortunately show a consistent picture of the lack of proper support for mothers who are breastfeeding in the health care system. The assistance offered is insufficient, obtaining it is more a matter of luck and not well-established practices of medical personnel. This is probably one of the main reasons for the rapid decline in breasfeeding rates by Polish mothers. A nationwide survey conducted in 2014 indicated that 98% of women start breastfeeding after childbirth, but only 46% of them still breastfeed at week 6. (there and Borszewska-Kornacka, Królak, Olejnik et al., 2014).

4. Tasks of the doctor, midwife and other professional groups in the promotion of reproductive health and serving the development of the family

As we see from the data of the above CNOL report, Poland is wasting a chance for healthy development of the family. Not using the potential of exclusive breasfeeding during the first 6 months after giving birth and then not encouraging

women to continue it for the next months up to 2 years, only in a mixed form, is a serious neglect of the health of offspring and parents (Ślizień-Kuczapska et al., 2017, Cesar et al., 2016).

Standards and recommendations in theory are not consistent with their practical implementation by healthcare professionals. Therefore, unfortunately, the subject of concern for the health and fertility of the family in Poland is underestimated and still marginalized.

As indicated earlier, the longer breastfeeding period, the stronger the protection of a woman against the development of many chronic and inflammatory diseases such as rheumatoid arthritis, type 2 diabetes, osteoporosis, depression, obesity (Cesar et al., 2016) and genital cancer: endometrium cancer and ovarian cancer, as well as breast cancer (DeSantis et al., 2016; Islami et al., 2015; Lord et al., 2008; Zhou et al., 2015; Zhang et al., 2014). Lowering the risk of developing endometriosis in connection with lactation is a novelty and a chance for women struggling with this serious disease. It is both an inhibitory effect on its development or recurrence resulting from lactation itself, and natural amenorrhea after childbirth, and other mechanisms (Farland et al., 2017).

Lactation and the resulting period of lactation infertility determines the natural interval between offspring, promotes regeneration of the female body before a possible next pregnancy, strengthens the marital relationship, and promotes family building (Wójcik 2016). This time is a chance to form the right attitude to health-conditioning behaviors, because "the ability to be a mother is not a gift that a woman receives at birth" (Borkowski, 2007).

Despite the recommendations for physicians regarding prevention of reproductive health disorders in the pre-conceptual, perinatal and post-natal period, this subject is neglected not only in Poland but also in the world, and if discussed then in an insufficient way.

According to Fehring, the time dedicated to the promotion of reproductive health in medical studies was less than one hour (1996). In a Canadian study of 2010, involving approximately 460 gynecologists and family physicians, and 239 residents, only 3% to 6% had adequate knowledge of fertility physiology and of effectiveness of fertility awareness methods in in family planning (further referred to as FAM). Of this group, only 50% mentioned FAM as a method of postponing conception, and about 77% recommended using FAM to plan the conception of a child. Interestingly, older family doctors devoted more time on family planning topics. Younger,

especially gynecologists, treated this subject marginally. This study resulted in the urgent need to deepen the knowledge in this field in the course of university education and post-graduate education (Choi et al., 2010). According to doctors in Poland: "obstetrician gynecologist can help the future mother from the beginning of pregnancy in the pursuit of effective lactation or to change her attitude to this issue.

However, in conversations with patients, the medics do not use arguments supported by scientific data - Evidence Based Medicine (EBM). An important problem is not giving sufficient information for mothers regarding the LAM method (lactation amennorhea method) during medical visit at puerperium. LAM is dedicated to mothers who exlusivly breastfeed her baby for the first 6 months and is not menstruating yet. There are also not sufficiently discuseed problems of individually selected other methods of family planning which should be safe during breastfeeding[3].

In the years 2011-2015, the Polish Association of Natural Family Planning Teachers (PSNNPR) together with the Faculty of Health Sciences and the International Federation of Medical Students Association (IFMSA) - initiated innovative facultative classes for students of medical faculties in Fertility Awarness Methods (FAM) at the Warsaw University of Medical Sciences, which were later also continued at several other medical universities in Poland. Classes were devoted to fertility care, promotion and procreation health issues. They allowed students to learn the methods of fertility awarness in their own practice, and to use them in medical diagnosis and treatment of fertility disorders.

The course included the author's PSNNPR programme for the user's course together with the elements of the teacher's course of the English method, i.e. the sympto-thermal method double-check. The subject of the faculty was based on the physiology of the menstrual cycle, the diagnosis of its disorders together with a detailed discussion of specific situations such as puberty, premenopause, and return of fertility after the pill or childbirth. In addition, it contained elements for the promotion of preconception care, natural delivery and breastfeeding.

Classes took the form of both seminars and exercises. In the surveys, majority of participants confirmed the need to conduct this type of classes at universities, their usefulness in future professional practice and personal life as well as learning new issues not yet addressed to at their university (Suszczewicz, Żukowska, Dmoch-

[3] Statements of prof. Mirosław Wielgoś and dr Beata Sterlińska Tulimowska from the CNOL Survey Report 2017 "Is Poland a friendly country for a nursing mother and her child?" - http://kobiety.med.pl/cnol/images/cnol/raport_2017.pdf

Gajzlerska, 2014). In 2015, as part of the CMKP (Center for Postgraduate Medical Education), the first nationwide training in fertility awarness methods for physicians as part of postgraduate education course obtained high evaluation of participants in the evaluation questionnaires.

Based on the aforementioned Act of 15 July 2011 on the nurse and midwife professions (*Journal of Laws,* 2011 No. 174 item 1039), recommendations were made to organize free educational meetings for parents from the 21st week of pregnancy, devoted to comprehensive knowledge about the pregnancy and careof a newborn baby. These classes are independent of the prenatal classes based on the Polish model by Fijałkowski, existing from the 1950s (Fijałkowski, 1989; Kwiatek et al., 2011), where midwives, physiotherapists and physicians present physiological aspects of pregnancy, the course of delivery and puerperium, care for the newborn and infant, the principles of a healthy lifestyle, and breastfeeding education. In this last task, a lactation consultant, rarely included in the team of lecturers, seems particularly competent.

During prenatal classes, issues of fertility recovery after birth are sporadic. For 30 years there has been a competent group of non-medical workers in Poland, family counselors, who are well-prepared staff to teach the principles of fertility awareness (FAM) after childbirth (LMM 2011, 2012; Kużmiak et al., 2017).

Non-medical workers can help in shaping relationships and marital ties after the birth of a child, in solving possible problems, and building a broadly understood culture of family life (Słowik, 2012).

In an American questionnaire survey from 2001, which included about 1200 midwives with an average seniority of about 10 years and an average of approx. 46 years of age, the scope of knowledge regarding FAM and LAM was studied. FAM was in the 8th place among family planning methods discussed with the patient and in the 9th place among the methods with the highest efficiency in the field of postponing conception. About 22% of midwives proposed FAM as a method of family planning after childbirth (Fehring, Hanson, Stanford, 2001).

5. Implementation of the recommendation to promote procreation health and concern for fertility care postulated in the 6th point of the NPZ

The scope of the implementation of the recommendation to promote procreation health and concern for fertility care postulated in the 6th point of the

NPZ, only in very narrow spectrum show the results of the conducted own research. In the years 2014-2017, 266 women from the Mazovian region in the procreative age who were recruited during the first postpartum visit were examined on the basis of the original questionnaire.

The obtained data was subjected to quantitative statistical analysis as well as qualitative verification. When asked about the method of family planning which the doctor suggested after childbirth, the patients responded in the following way:

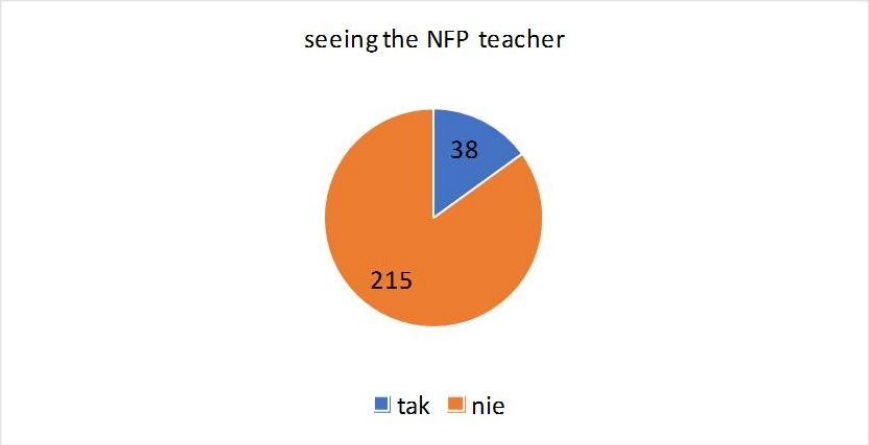
Table 1. Family planning methods recommended by doctors

Family planning methods	*n*	%
lactation amenorrhea	14	5,3
lactation amenorrhea + natural methods	7	2,6
lactation amenorrhea + contraception	1	0,4
Natural methods	48	18,0
contraception	66	24,8
There was no conversation about it	99	37,2
None	18	6,8
other	2	0,8
Lack of data available	11	4,1
total	266	100

n - number of people; % - percentage of the sample

In the largest number of cases, the subjects did not talk with a doctor about the methods of family planning after childbirth. The most often indicated method by doctors was contraception, although the golden standard according to WHO for this period after childbirth and exclusive breastfeeding up to half a year is LAM (lactation amenorrhea method). When asked about looking for NFP teacher to learn about family planning after labour, thirty-eight people (14.3%) responded positively.

Chart 1. Percent frequency distribution - seeing the NFP teacher to discuss the topic of returning fertility after childbirth, and sexuality



In the question about factors determining the choice of the method of family planning after childbirth, patients most often indicated: safety for health, ethical / religious considerations and lack of side effects. Detailed results are presented in Table 2.

Table 2. Elements that in the case of the subjects determined the choice of family planning method

Decisive elements	*n*	%
Lack of side effects	177	66,5
Safety (in terms of health)	198	74,4
reversibility	77	28,9
Effectiveness in postponing conception	131	49,2
application in diagnostics of health and fertility disorders	82	30,8
Deepening of marital relationship	118	44,4
Ethical/religious considerations	184	69,2
Easy accessibility	66	24,8
Low costs	80	30,1
other	4	1,5

Therefore, if safety and lack of side effects are the highest priorities determining the method of family planning after childbirth, why, despite the WHO recommendations, it is definitely too rare during a postpartum visit to mention LAM and using fertility awarness methods to observe fertility after delivery? So many benefits of natural lactation and amenorrhea after childbirth in the promotion of health and family development are omitted.

According to Augustyniak, educational activities in the perinatal period should be an integral part of the care over the mother and father, and their implementation should start already in family counseling centers, at a gynecologist's, obstetrician's during the first visit of a pregnant woman, throughout pregnancy, and at prenatal classes. Noteworthy is the potentially auxiliary role of non-medical workers who, in the face of lack of time of medical workers, may partially fill the education gap. As already mentioned, this group has appropriate, certified competencies for detailed and individualized discussion of the subject of fertility return after childbirth, and breastfeeding principles (Troszyński 2009). Meanwhile, according to Polish research, the most frequently used sources of information on family planning methods were magazines, self-help guides and books (59%). Another source was a doctor (56%), and only 13% of the women surveyed sought advice from a midwife (Bączek, Kawecka, Dmoch-Gajzlerska, 2010). In the study cited in Biskupska's paper, conducted among 100 full-time students of first-degree obstetrics and nursing in 2011, low level of knowledge was revealed, especially in the field of fertility awarness. 86 and 89 people respectively were able to name the female and male gonads, 74 people named the phases of the menstrual cycle, 50 and 43 people knew the lenght of life of the egg and sperm, 75 people named at least two fertility biomarkers, 56 people named the Pearl index as a determinant of the effectiveness of pregnancy postponning method, but only four of them knew what it meant, and among the three chosen methods of contraception, the most common were condoms, hormonal pills and an IUD.

Considering that a midwife in the primary health care system covers up to 6600 women, newborns and infants up to the age of two months, there are definitely women in procreative age in this group, e.g. after childbirth, who need advice on fertility awarness (Biskupska, Niewiadomski, 2011). Unfortunately, some of these women will not get proper advice, despite the education and competence of the midwife, for the simple reason of lack of time and physical possibilities to cover these women with this kind of help.

There are well-prepared foundations and associations in Poland for family life education, we have professional textbooks and staff prepared for educational activities, however, imperfections of the law and organization of the education and health sector make it impossible to undertake multi-sectoral activities combining both sectors and other educational institutions (ibidem).

Despite the previously mentioned recommendations and standards, the same applies to promotion of breastfeeding.

According to Dzbuk's research, the majority of respondents (89%) consider the Internet and television as key sources from which they derive knowledge on this subject. Other sources include a lactation consultant (63%), literature (63%), classes in aprenatalclasses (45%), midwife (40%), family and friends (33%), and gynecologist (11%) (Dzbuk et al., 2016).

Postnatal education is also important in perinatal period. It is carried out in neonatal-obstetric departments, because in this period there is the greatest need and motivation to acquire the necessary skills and knowledge.

An interesting model of postpartum education standard implemented in the School of Mothers and Fathers in the neonatological and obstetrics department was created in Szczecin (Augustyniak, Rudnicki, Grochan, 2012).

This is the first document of this type, ensuring safety for mother and her child after returning home. Each parent obtains the necessary knowledge about the care for the child, natural feeding and the principles of postpartum hygiene.

An educator is a midwife, nurse or lactation consultant. During the implementation of the postnatal education program an educator uses theoretical knowledge and practical skills regarding:

- care of the mother at the postnatal ward,
- care of the newborn baby, bathing, changing and dressing the child,
- breastfeeding,
- psychological preparation for motherhood,
- availability of healthcare for the mother after childbirth (lactation counseling centers, family counseling centers, outpatient clinics and other available for the region in which postpartum education is carried out).

5. The proposed standard of a puerperal visit at the gynecologist and the possibility of cooperation with medical and non-medical staff in the field of breastfeeding promotion and return of fertility after childbirth

The standard puerperal visit should take place between 4 and 6 weeks after delivery. It is a clasp that includes the period of care for a pregnant woman and after the birth of a child. It may and should be done together with her husband, because, like during prenatal visits, the father of the child actively participates in the process of responsible care for the family and its development. According to Fijałkowski, the participation of the father in medical visits and classes in the birth school helps the new family go through all the difficulties and crises associated with the appearance of the child (Fijałkowski, 1987). A man must get to know and learn that he is a father because he has no fatherhood experience, no personal experiences of fatherhood. He only has the experience of union with a woman, he does not know what it is to be a father. He must find out that there is a child and accept himself as a responsible father (Półtawska, 2016).

The scope of a medical appointment in postpartum should be in accordance with the generally accepted schedule of visits, but individualized and depending on whether it is done with a new doctor or a continuation of prenatal care from the current one. In the subjective examination, it is worth taking into consideration the full general and family history, as well as gynecological and obstetric history from the period before the last pregnancy. As to the postpartum, the doctor may obtain the information on the basis of the discharge documentation from the hospital or the Birth Center, noting any complications in the prenatal or postnatal period on the part of the mother or child, time, place and route of birth, Apgar score of the newborn, gender and birth weight of the child.

Each of the above information can be an important element in the perspective of lactation success and the rate of fertility recovery after childbirth. It is worth to verify the additional tests often recommended at discharge from the hospital to be performed for a control visit after 6 weeks in the puerperium, e.g. morphology, thyroid hormones, glycaemia profile and OGTT test, blood pressure control. Due to the shifting of the procreative age of women into their 30ies, chronic diseases such as diabetes, hypertension, endocrine diseases, condition after treatment of decreased marital fertility, epilepsy, depression, etc., are more common in this group of mothers. They may complicate pregnancy and puerperium, and affect successful or

non-successful breastfeeding and the time of fertility return. We now know that there are few contraindications to natural feeding and its success depends to a large extent on the competence of the staff from the first minutes after birth, the knowledge of the mothers themselves, and the support and motivation of the closest family (Nehring-Gugulska et al., 2017; Dzbuk et al.; 2012). Although there are states slightly delaying the transformation of the so-called lactogenesis I into phase II even up to 14 and more days, thanks to proper perinatal care in the hospital and active involvement in the puerperal recovery process, especially of the husband, most women at the time of discharge are exclusively breastfeeding (Ślizień-Kuczapska, Nehring-Gugulska, 2017).

Breastfeeding is an instinctive activity for a woman, Dzbuk's research from 2012 and other indicate that the question: when to start breastfeeding after birth, about 83.33% of women answer correctly, that is, up to 2 hours after delivery. According to a Polish study from 1997, approximately 97% of women initiated breastfeeding after giving birth, but only 57% continued it up to 6 months, and from this group only 4-9% of mothers exclusively breastfed their baby half a year after childbirth (Zagórecka, Piotrowska-Jastrzębska, 2007, Zagórecka and others, 2008). The most current studies in this regard were quoted above. Therefore, despite the recommendations in line with the current recommendations of the World Health Organization (WHO), the United Nations Children's Fund (UNICEF), the European Society of Paediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN), the American Academy of Pediatrics (AAP) saying that for the first 6 months of life, children should be exclusively breastfed, only some women have exclusive lactation in puerperium (Szajewska et al., 2016; ESPGHAN, 2009; WHO, 2002). Hence, the doctor's role in maintaining the mothers' conviction that breastfeeding is worthwhile and it is good to enjoy numerous health and economic benefits for themselves, the child and the family, is extremely important. For this purpose, a personal conversation of a doctor with a woman or both parents during pregnancy and then during a visit in postpartum and a supporting role of lactation counsultants, midwives and non-medical staff such as family counselors may be used.

During the physical examination, the doctor should assess the condition of the breasts of the nursing mother and exclude e.g. milk stasis, inflammation or damage to the nipples. The most common lactation problem, according to data from environmental midwives, is perceived low milk supplay and wrong technique of sackling and latching (Jasik, 2014).

Therefore, the doctor may refer the mother to the lactation consultant or recommend the appropriate procedure. Next, reproductive organs exam and healing of possible scars after cesarean section or episiotomy should be assessed. In the case of significant disturbances of statics of the reproductive organs, the physician may recommend consultations with a physiotherapist. In addition, the Doctor should provide the mother with information about the first intercourse after childbirth and possible difficulties in sexual relation after delivery and during lactation. Sexuality after childbirth is an important element of counseling during the postpartum visit. Parents, especially after cesarean section, are interested in the length of the recommended interval between subsequent children, so the doctor should present the rules of the rate of return of fertility after childbirth depending on the method of feeding the child. The first bleeding after delivery in the absence of lactation may occur at the end of the puerperium. In the case of breastfeeding women, one should expect a longer period of so-called lactation amenorrhea (LAM). LAM is recognized in the world literature as a period of natural infertility with an effectiveness of 98% and covering the first 6 months of life of a child exclusively breastfed (Labbok et al 1990, 1994, 1997).

The principles of lactation amenorrhea - LAM are consistent with the so-called Bellagio Consensus from 1988 and recommended as a method of family planning for the first six months after giving birth to women who are exclusively breastfeeding. The LAM recommendations are very similar to the so-called organic- ecological breasfeeding, which meets the following criteria:

- being in close contact with child (eg scarves, sleeping together);
- unlimited feeding during the day and at night;
- using feeding as a way to calm the child;
- feeding in a position lying down;
- not using pacifiers or bottles.

In the first half-year of a child who is exclusively breastfed, there is a low chance of proper ovulation with subsequent adequacy of the corpus luteum phase. During this period, we can observe the so-called silent ovulation without subsequent bleeding, which is associated with a higher incidence of a so-called LUFT - luteinized unruptered follicule. According to studies, the occurrence of the first bleeding up to 6 months after delivery is not a good marker for ovulation return (Perezi, 1992; Labbok et al., 1997).

Among the factors accelerating the return of fertility after childbirth, we distinguish:

- factors dependent on the child: the sex of the child; the birth age and diseases of the child preventing breastfeeding in general or limiting them, e.g. organ defects, congenital metabolic and enzymatic blocks, prematurity;
- factors dependent on the mother: her age, fertility;
- pregnancy and pre-pregnancy factors, e.g. some cases of physical or intellectual disability, severe course of chronic illness, breast surgery, stress, chronic psychological and physical exhaustion;
- perinatal and puerperal factors, e.g.complications in perinatal period, diseases, hospitalizations, operations complicating the course of puerperium, deliberate abandonment of lactation, stress, lack of professional support and among those close to you;
- later factors, e.g. abandoning the principles of feeding on demand, long breaks (especially at night), using pacifiers, giving water and / or feeding other foods in the first 6 months, return to work, the so-called dynamic metabolic / energy balance;
- individual, hereditary factors.

According to Rötzer, in women exclusively breastfeeding, the first 84 days, i.e. 12 weeks, is the period of absolute infertility, and the subsequent 3 months up to ½ year includes LAM with a chance of conception at the level of approx. 2%. It is advisable to provide this essential information to every mother before discharge from the hospital, or at the latest during a visit in the late puerperium. These are well-documented recommendations, which promote breastfeeding exclusively for 6 months, and thus healthy family education, and are an important element in reducing fertility fear after childbirth.

During the first half-year of a child's life or before, a woman may start using one of the fertility awarness methods for specific situations, i.e. return of fertility after childbirth. The doctor, recommending LAM and FAM after childbirth, avoids the paradoxical phenomenon of double protection against return of fertility, which may occur when using contraception during natural lactation infertility. In addition, this way of family planning is the most ecological, devoid of the possible harmful effect of hormonal agents on the breastfed child (Troszyński, 2009; Rotzer, 2007; Kramarek, 2006; Kosmala, 2002).

During the visit in the postpartum a doctor, recommending natural feeding and family planning based on the physiological process of returning fertility until the woman is ready to have another child, contributes to the improvement of family health and its dynamic and sustainable development (Chowdhury et al., 2017).

Summary and Conclusions

In modern midwifery, a midwife, obstetrician, gynecologist, neonatologist and other medical staff, e.g. a physiotherapist, dietitian, lactation consultant, and non-medical staff, e.g. a psychologist, family counselor and others, can create an interdisciplinary team supporting a young family. It is an idea coherent with the 6th point of the ministerial health program for the years 2016-20. It is very important for the team to be able to work efficiently, cooperate and complement each other if necessary in different areas of the life of a young mother and her relatives. Unfortunately, so far, there are no official recommendations in this area and financing under the NFZ (the Polish national heatlthcare system). Numerous studies prove the need to conduct planned and systematic education, tailored to the individual needs of women after childbirth. The physician and midwife are people who are professionally prepared to perform these tasks. Basing on current recommendations and standards, in particular a midwife can start the woman's education process earlier, i.e. during pregnancy care. Unfortunately, the enemy of these activities may become an excess of duties and lack of time. Therefore, it would be worth to include other potential members of the interdisciplinary team in these activities. Such early, systematic and long-lasting education will allow the woman to consolidate her knowledge even before the birth, which can significantly contribute to a greater sense of control over the postpartum situation and increase her self-esteem (Kazmierczak and others, 2010).

- The physician, due to his profession and social trust, should participate in a special way in the promotion of pro-health behaviors during preparation for parenthood and pre- and post-natal periods.
- The midwife possesses special legal prerogatives and medical qualifications that enable her to take on a complementary role in relation to the doctor in undertaking the promotion of pro-health behaviors during the procreation period.

- There is a group of medical and non-medical personnel who have not yet been fully used so far that can enrich and supplement the shortage in pre- and post-natal education.
- Breastfeeding and the phenomenon of natural lactation infertility are interrelated. They are an important element of procreation health care and are associated with documented health benefits for the mother, offspring and the whole family.
- Promotion in this area, especially standardization of recommendations, e.g. during postpartum visits, may significantly contribute to the potentialization of family health and its development.
- Counseling in the field of breastfeeding support as well as teaching of fertility recognition methods is not covered by the NFZ refund so far.

Bibliography:

American Academy of Pediatrics, Section on Breastfeeding (2005), Breastfeeding and the use of human milk, *Pediatrics*, nr 115, s. 496-506.

Augustyniak K., Rudnicki J., Grochan E. (2012), Standard edukacji poporodowej realizowanej w Szkole Matek i Ojców na oddziale neonatologiczno-położniczym, *Perinatologia, Neonatologia i Ginekologia*, nr 1(5), s. 46-50.

Bączek G., Kawecka N., Dmoch Gajzlerska E. (2010), Metody planowania rodziny w grupie kobiet zamężnych - wybór, ocena, satysfakcja, *Problemy Pielęgniarstwa*, nr 18(3), s. 266–271.

Banaszkiewicz O. (2017), Pokarm kobiecy – skład i funkcja, (w:) *Karmienie piersią w teorii i praktyce. Medycyna Praktyczna*, M. Nehring-Gugulska, M. Żukowska-Rubik, A. Pietkiewicz (red.), s. 51-57, Kraków: Medycyna Praktyczna.

Barczentewicz M. (2008), Naprotechnology jako narzędzie diagnostyki i leczenia niepłodności i innych chorób, (w:) *Naturalne planowanie rodziny w ujęciu wybranych dyscyplin naukowych*, W. Wieczorek i in (red.), s. 229-238, Lublin.

Biskupska M., Niewiadomski T.J. (2011), Wiedza na temat fizjologii płodności – obszar niezagospodarowany przez sektor edukacji i sektor ochrony zdrowia, *Nowiny Lekarskie*, nr 6(80), s. 469–472.

Borkowski W. (2007), *Opieka pielęgniarska nad noworodkiem*, Kraków: Wyd. Medycyna Praktyczna.

Boyle P., Stanford J. (2011), Natual procreative technology – a multifactorial approach to the chronic problem of infertility, *Sveikatos Mokslai Biomedicina*, nr 21(3), s. 37-42.

Chowdhury R., Sinha B., Sankar MJ., i in. (2015), Breastfeeding and maternal health outcomes: a systematic review and meta-analysis. *Acta Paediatr*, nr 467, s. 96-113. doi: 10.1111/apa.13102.

Cesar GV., Bahl R., Barros JDA., i in. (2016), Breastfeeding in the 21st century: epidemiology, mechanisms,and lifelong effect, *The Lancet Breastfeeding Series Group*, nr 387, s. 475-90.

Choi J., Chan S., Wiebe E. (2010), Natural Family Planning: Physicians' Knowledge, Attitudes, and Practice, *Journal of Obstetrics and Gynaecology Canada*, nr 7(32), s. 673-678.

DeSantis CE., Fedewa SA., Goding Sauer A., i in. (2016), Breast cancer statistics, 2015: Convergence of incidence rates between black and white women. *CA: A Cancer Journal for Clinicians*, nr 66(1), s. 31–42. https://doi.org/10.3322/caac.21320

Diaz, S., Rodriguez G., Peralta O., i in. (1988), Lactational Amenorrhea And The Recovery Of Ovulation And Fertility In Fully Nursing Chilean Women, *Contraception*, nr 38, s. 53-67.

Dzbuk E., Bakalczuk G., Padała O., i in. (2016), Wiedza w zakresie karmienia piersią wśród kobiet po porodzie *Medycyna Ogólna i Nauki o Zdrowiu*, nr 4(22), s. 260–263.

Eidelman AL., Schanler RJ. i in. (2012), AAP, Section on Breastfeeding. Breastfeeding and the use of human milk, *Pediatrics*, nr 129(3), s. 827-41.

ESPGHAN Committee on Nutrition i in (2009), Breast-feeding: A commentary by the ESPGHAN Committee on Nutrition, *J Pediatr Gastroenterol Nutr*, nr 49, s. 112-125.

Fehring JR. (1996), Physician and nurses' knowledge and use of natural family planning, The Linacre Quarterly, *Sage Journals*, nr 4(62), s. 22-28.

Fehring JR., Hanson L., Stanford BJ. (2001), Nurse-midwives' knowledge and promotion of lactational amenorrhea and other natural family-planning methods for child spacing, *Journal of Midwifery & Women's Health*, nr 2(46), s. 68-73.

Farland LV., Eliassen H., Tamimi RM., Michels KB., Missmer SA. (2017), History of breast feeding and risk of incident endometriosis: prospective cohort study, *BMJ*, nr 358, s. j3778. https://doi.org/10.1136/bmj.j3778

Fijałkowski W. (1987), *Spotkania w szkole rodzenia*, Warszawa: Państwowe Zakłady Wydawnict Lekarskich.

Fijałkowski W. (1998), Dwurodzicielstwo szansą na sukces, w: *Rodzicielstwo bez porażek*, s. 9-16, Warszawa.

Fijałkowski W. (1998), *Poród naturalny po przygotowaniu w szkole rodzenia*, Warszawa.

Główny Urząd Statystyczny (2017), *Rocznik Statystyczny Rzeczypospolitej Polskiej*, Warszawa: GUS. https://stat.gov.pl/obszary-tematyczne/roczniki-statystyczne/roczniki-statystyczne/rocznik-statystyczny-rzeczypospolitej-polskiej-2017,2,17.html

Hassiotou F., Health.B, Ocal O. i in. (2014), Breastmilk stem cells transfer from mother to neonatal organs. *Experimental Biology Abstracts*, nr 28, 216.4.

Islami F., Liu Y., Jemal A., i in. (2015), Breastfeeding and breast cancer risk by receptor status-a systematic review and meta-analysis, *Annals of Oncology*, nr 26(12), s. 2398–2407. https://doi.org/10.1093/annonc/mdv379

Jasik J. (2014), Karmienie naturalne – cenny dar i kamień milowy opieki nad noworodkiem, *Rocznik Lubuski*, nr 40(2), s. 247-259.

Johnson A., Kirk R., Rosenblum L., i in. (2015), Enhancing breastfeeding rates among African American women: a systematic review of current psychosocial interventions. *Breastfeeding Medicine,* nr 10(1), s. 45-62.

Kaźmierczak M., Gebuza G.,Gierszewska M., i in. (2010), Ocena poziomu wiedzy położnic na temat okresu połogu, *Perinatologia, Neonatologia i Ginekologia*, nr 3(4), s. 296-301.

Kosmala K. (2002), Okres poporodowy, *Zeszyty Naukowe INER*, nr 1, s. 12-28.

Kramarek T. (2006), *Rozpoznanie okresowej płodności małżeństwa. Metoda objawowo-termiczna*, Poznań: Fundacja Głos dla Życia.

Kwiatek M., Gęca T., Biegaj-Fic J., i in. (2011), Szkoła rodzenia – profil pacjentek oraz wpływ zajęć na przebieg porodu i stan noworodka, *Medycyna Ogólna i Nauki o Zdrowiu*, nr 3(17), s. 111-115.

Kwiecień J. (2013), Wpływ mikrobiomu jelitowego na czynnosci ukladu nerwowego i zachowanie człowieka. Standardy medyczne, *Pediatria*, nr 1, s. 183-188.

Fernandez L., Langa S., Martin V. i in. (2013), The human milk microbiota: origin and potential roles in health and disease. *Pharmacological Research*, nr 69 (1), s. 1-10.

Labbok MH., Cooney K., Coly S. (1994). *Guidelines: Breastfeeding, Family Planning And The Lactational Amenorrhea Method—Lam*. Georgetown University: Institute For Reproductive Health.

Labbok MH., Hight-Laukaran V., Peterson AE., i in. (1997). Multicenter Study Of The Lactational Amenorrhea Method (Lam): I. Efficacy, Duration, And Implications For Clinical Applications, *Contraception*, nr 55, s. 327-336.

Labbok. M., Koniz-Booher P., Shelton J., i in. (1990), *Guidelines for breastfeeding in family planning and child survival programs*. Georgetown University: Institute for Reproductive Health.

Li DP., Du C., Zhang ZM., i in. (2014), Breastfeeding and ovarian cancer risk: a systematic review and meta-analysis of 40 epidemiological studies, *Asian Pacific Journal of Cancer Prevention*, nr 15(12), s. 4829–37. https://doi.org/10.3389/fsurg.2014.00014

LMM (2011), *Sztuka naturalnego planowania rodziny. Kurs podstawowy*, Zalesie Górne: LMM.

LMM (2012), *Sztuka naturalnego planowania rodziny. Powrót płodności po porodzie*, Zalesie Górne: LMM.

Lord S.J., Bernstein L., Johnson K.A., i in., (2008), Breast cancer risk and hormone receptor status in older women by parity, age of first birth, and breastfeeding: A case-control study, *Cancer Epidemiology Biomarkers and Prevention*, nr 17(7), s. 1723–1730. https://doi.org/10.1158/1055-9965.EPI-07

Nehring-Gugulska M. Korzyści wynikające z karmienia piersią. (2017) (w:) *Karmienie piersią w teorii i praktyce*, M. Nehring-Gugulska, M. Żukowska-Rubik, A. Pietkiewicz (red.), s. 43-50, Kraków: Medycyna Praktyczna.

Nehring-Gugulska M., Żukowska-Rubik M., Pietkiewicz A. (2017), *Karmienie piersią w teorii i praktyce*, Kraków: Medycyna Praktyczna.

Papieska Rada ds. Duszpasterstwa Służby Zdrowia (2017), *Nowa Karta pracowników Służby Zdrowia*, Katowice: Księgarnia św. Jacka.

Pérez A., Labbok M., Queenan J. (1992) Clinical Study Of The Lactational Amenorrhea Method For Family Planning, *Lancet*, nr 339, s. 968-969.

Półtawska W. (2016), *Małżeństwo jako całopalenie*, http://www.fronda.pl/a/wanda-poltawska-malzenstwo-jako-calopalenieslajder-na-sobote,53273.html (13.02.2016).

Program polityki zdrowotnej. Program kompleksowej ochrony zdrowia prokreacyjnego w Polsce w latach 2016-2020, Ministerstwo Zdrowia, Warszawa 2017. https://www.gov.pl/zdrowie/program-kompleksowej-ochrony-zdrowia-prokreacyjnego-w-polsce

Rekomendacje Zarządu Głównego PTG w zakresie opieki przedporodowej w ciąży o prawidłowym przebiegu (2005), *Ginekologia po Dyplomie*, Wyd. Specjalne nr 12.

Rötzer J. (2007), *Ja i mój cykl*, Warszawa: INER.

Rozporządzenie Ministra Zdrowia z dnia 20.09.2012 Standardy postępowania medycznego przy udzielaniu świadczeń zdrowotnych z zakresu opieki okołoporodowej sprawowanej nad kobietą w okresie fizjologicznej ciąży, fizjologicznego porodu, połogu oraz opieki nad noworodkiem. (Dz. U. z 2016 r. poz. 1132).

Sheehan A., Schmied V., i in. (2013), Exploring the process of women's infant feeding decisions in the early postbirth period. *Qual Health Res*, nr 23(7), s. 989-98.

Słowik M. (2012), O potrzebie rozwoju poradnictwa rodzinnego opartego na wartościach chrześcijańskich – na przykładzie działalności Kościoła katolickiego w Polsce, *Paedagogia Christiana*, nr 2(30), s. 193-213.

Suszczewicz N., Żukowska J., Dmoch Gajzlerska E., (2014), Evaluation of innovative Fertility awarness based method course on Medical University of Warsaw, *Giornale Italiano di Obstetricia e Ginecologia*, nr 7(XXXVI), s. 583-586.

Szajewska H., Horvath A., Rybak A., i in. (2016), Karmienie piersią. Stanowisko PolskiegoTowarzystwa Gastroenterologii, Hepatologii i Żywienia Dzieci, *Standardy Medyczne/Pediatria*, nr 13, s. 9-24.

Ślizień-Kuczapska E., Nehring-Gugulska M. (2017), Regulacja procesu wytwarzania pokarmu, (w:) *Karmienie piersią w teorii i praktyce*, M. Nehring-Gugulska, M. Żukowska-Rubik, A. Pietkiewicz (red.), s. 43-50, Kraków: Medycyna Praktyczna.

Ślizień-Kuczapska E., Sys D., Baranowska B., Tataj-Puzyna U. (2017), Zdrowie prokreacyjne jako zasadniczy kierunek troski o zdrowie rodziny. Wybrane zagadnienia profilaktyki zaburzeń płodności oraz promocji karmienia piersią na tle sytuacji demograficznej Polski, *Kwartalnik Naukowy Fides et Ratio*, nr 4(32), s. 88-111.

Taveras E., Li R., i in. (2004), Opinions and practices of clinicians associated with continuation of exclusive breastfeeding. *Pediatrics,* nr 113(4), s. 283-90.

Troszyński M. (2009), *Rozpoznawanie płodności.Materiały edukacyjno-dydaktyczne dla nauczycieli NPR, pracowników służby zdrowia oraz zainteresowanych zdrowiem prokreacyjnym,* Poznań: Wydawnictwo Bonami.

Ustawa o zawodzie lekarza i lekarza dentysty z dnia 5 grudnia 1996 r. (Dz. U. z 1997r. Nr 28 poz. 152)

Ustawa z dnia 15 lipca 2011 r. o zawodach pielęgniarki i położnej, (Dz.U.2011.174.1039)

WHO (2000), *Manual for the Standardized Investigation and Diagnosis of the Infertile Couple*. Cambridge: Cambridge University Press.

WHO (2002), Global Strategy for infant and young child feeding. Annex 2, (w:) *Infant and young child nutrition*. Geneva: 55 WHA, Report by the Secretariat. Wersja. polska: http://kobiety.med.pl/cnol/images/cnol/Publikacje/WHOzywienie.pdf

Wójcik E. (2016), *Poradnik małżeński. W poszukiwaniu sensu życia,* Warszawa: Oficyna wydawniczo-poligraficzna Adam.

Zagórecka E, Motkowski R, Stolarczyk A i in. (2008), Realizacja zaleceń żywienia uzupełniającego w grupie niemowląt uczestniczących w projekcie badawczym „Nawyki żywieniowe a stan odżywienia niemowląt w Polsce", *Pediatria Polska*, nr 83, s. 136-149.

Zagórecka E, Piotrowska-Jastrzębska J. (2007), Żywienie niemowląt – wybrane aspekty. *Pediatria Polska*, nr 82, s. 559-566.

Zhang BZ., Zhang HY., Liu HH., i in. (2015), Breastfeeding and maternal hypertension and diabetes: a population-based cross-sectional study, *Breastfeeding Medicine : The Official Journal of the Academy of Breastfeeding Medicine*, nr 10(3), s. 163–167. https://doi.org/10.1089/bfm.2014.0116