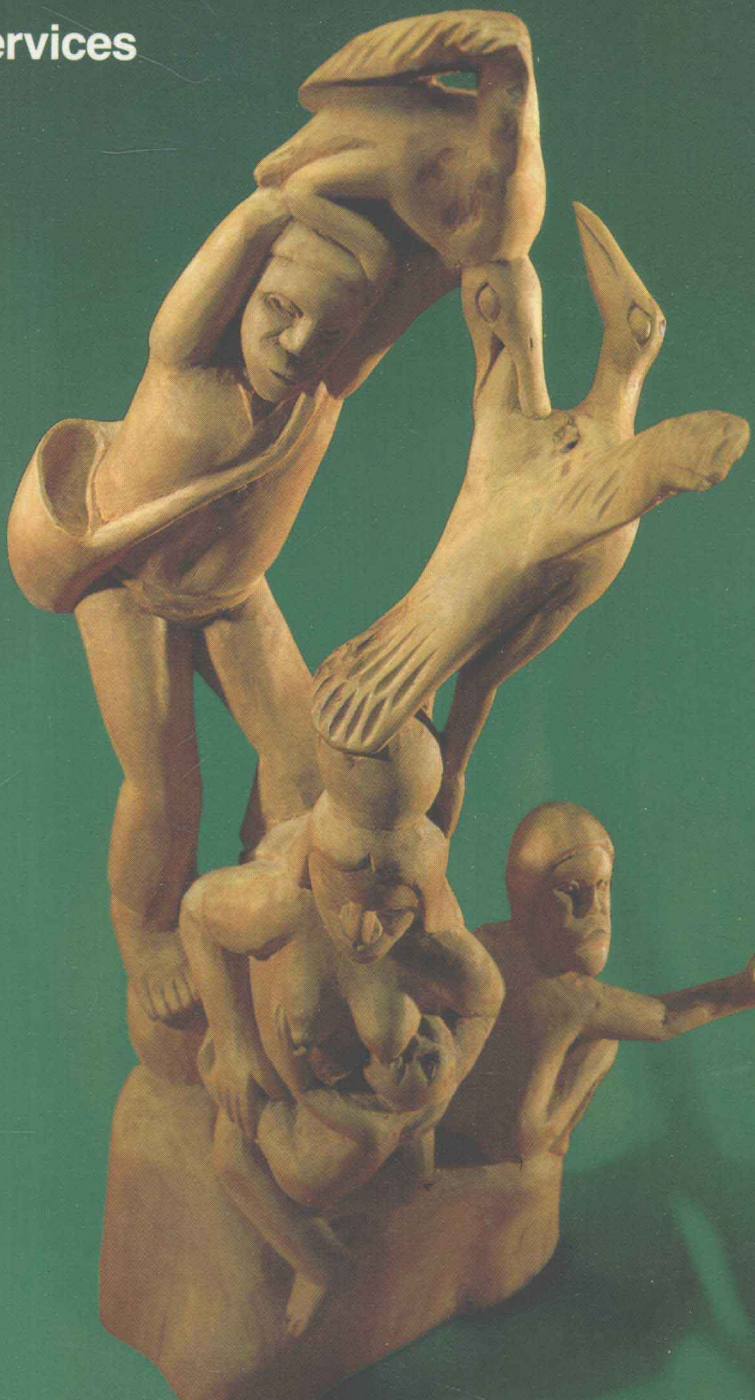
Natural family planning

A guide to provision of services



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Preface

Methods of natural family planning (NFP) are based on observation of naturally occurring signs and symptoms of the fertile and infertile phases of the menstrual cycle. Awareness of the fertile phase can allow a couple to time intercourse, either to avoid or to achieve pregnancy. Natural family planning thus provides an alternative for those who, for any reason, cannot or do not wish to use pharmacological or mechanical contraceptives.

The present guide is intended for use by programme managers, administrators, and service providers in family planning and health care systems who are responsible for developing or expanding NFP services. The guidelines given in this publication are not meant to be rigorously applied but should be adapted to the local situation.

Successful delivery of NFP services is essentially linked to education of potential users, and hence this guide includes specific recommendations on training of NFP teachers as well as on service delivery. A brief explanation of the current NFP methods is also provided. Several annexes provide complementary information: Annex 1 gives comparative data on the effectiveness of all family planning methods, including NFP; Annex 2 is a list of organizations from which information on NFP methods and training materials are readily available; Annex 3 presents sample report forms for use in NFP programmes; Annex 4 briefly describes some existing NFP programmes; and Annex 5 gives answers to a range of questions frequently asked about NFP.

This guide is one of a series of publications on family planning issued by the World Health Organization since 1976. It synthesizes the knowledge and experience of experts in NFP from around the world. The guide was developed by, among others, members of the International Federation for Family Life Promotion (IFFLP) who conducted special workshops in Mauritius, Hong Kong, and

Ecuador and at the Fourth IFFLP Congress in Ottawa, Canada, in 1986, and participants in an informal working group on natural family planning who met at the WHO Regional Office for the Americas in Washington, DC, in 1986. In addition, an extensive field review was conducted that included professionals with NFP experience from the IFFLP, the United States Agency for International Development, the Institute for International Studies in Natural Family Planning, Family Health International, the International Planned Parenthood Federation and staff from both WHO Headquarters and Regional Offices.

The financial support of the United Nations Population Fund (UNFPA) is gratefully acknowledged.

Comments and queries on this publication should be addressed to: Maternal and Child Health, World Health Organization, 1211 Geneva 27, Switzerland.

Other WHO publications on contraception and family planning

Female sterilization: guidelines for the development of services. 1976 (Offset Publication No. 26)
Induced abortion: guidelines for the provision of care and services. 1979 (Offset Publication No. 49)
Oral contraceptives: technical and safety aspects. 1982 (Offset Publication No. 64)
Intrauterine devices: their role in family planning care. 1982 (Offset Publication No. 75)
Barrier contraceptives and spermicides. Their role in family planning care. 1987
Mechanism of action, safety and efficacy of intrauterine devices: report of a WHO Scientific Group, 1987 (WHO Technical Report Series, No. 753)
Technical and managerial guidelines for vasectomy services. 1988.

Contents

1. General considerations

Natural family planning (NFP) is a term used to describe methods of planning or preventing pregnancy based on observation of naturally occurring signs and symptoms of the fertile and infertile phases of the menstrual cycle. People who use NFP to avoid or delay pregnancy abstain from intercourse on potentially fertile days. Those wanting to achieve pregnancy use NFP to identify the fertile phase and hence maximize the probability of pregnancy. Techniques include the basal body temperature method, the cervical mucus (Billings') method, the symptothermal method, and the calendar or rhythm method (Ogino-Knaus). It is important to note that NFP is not a method of contraception but rather a technique for determining the fertile period; abstinence during this period is what prevents pregnancy. The methods are thus likely to be of interest to people who, for any reason, do not wish to use mechanical or pharmacological contraceptives.

Advantages of NFP methods include the following:

- NFP can be used either to avoid or to achieve pregnancy.
- There are no physical side-effects.
- The correct use of NFP methods increases self-awareness and knowledge of human reproductive functions.
- Users develop self-reliance.
- NFP use can promote involvement of the man, and cooperation, communication, and shared responsibility of the couple for family planning.
- NFP services can be provided as a separate service or as part of an established health and family planning or community agency programme.

- Delivery of NFP services is not dependent on medically qualified personnel.

The disadvantages of NFP include the following:

- The instruction period for users is about 3 months.
- NFP techniques must be taught by trained NFP teachers.
- The commitment and cooperation of both partners are essential.
- The users must keep daily records of signs of fertility.
- When NFP is used to avoid pregnancy, some couples experience emotional stress as a result of the need to abstain from intercourse for between 8 and 16 days, depending on the method they use. Tension may also be caused by uncertainty about the effectiveness of the methods.

Development of NFP methods

The calendar or rhythm method was the first NFP method to be developed, between the 1920s and 1940s. It is based on the fact that ovulation occurs about two weeks before menstruation, regardless of the length of a woman's menstrual cycle. Studies conducted in several countries have shown that, of women using any form of family planning, up to 41% were using rhythm (*1*). However, the rhythm method is not completely reliable. Improved understanding of human reproductive physiology has led to the development of more reliable natural methods of family planning. Instead of using only calendar records of past cycle lengths to calculate the probable fertile period, recently developed NFP methods use day-to-day monitoring of physiological signs of fertility.

Effectiveness of natural family planning

The effectiveness of many reversible methods of family planning depends both on how well the users understand the method and on how well they use that knowledge.

Effectiveness is expressed in terms of how many pregnancies would occur in 100 women who used the method for 12 months; thus, one pregnancy would be equivalent to a failure rate of 1%. In some cases, the method itself may be theoretically extremely effective but the way it is used in practice may make it less so.

Most family planning methods have a theoretical failure rate of 5% or less (see Annex 1). Sterilization is the most effective, with a failure rate of less than 1%. Hormonal contraceptives (oral, injectable, or implantable) and the intrauterine device have theoretical failure rates of between 0.3% and 3%; barrier contraceptives and spermicides (e.g., condom, diaphragm, cervical cap, foam) between 1% and 5%. Natural family planning methods also have a theoretical failure rate of between 1% and 5%, depending on the method used.

Use-effectiveness rates for some methods (e.g., sterilization, hormonal implants, intrauterine device) are about the same as theoretical effectiveness rates. However, when the effectiveness of a method depends on action by the user—as do the contraceptive pill, condom, diaphragm, foam, and natural methods—use-effectiveness rates may be up to 10 times lower than theoretical effectiveness rates. Motivation is important in these user-dependent methods since the stronger the motivation of the user the more likely it is that the user will apply the method effectively. Actual failure rates for the contraceptive pill range from 1% to 8%; for condoms, from 3% to 15%; for diaphragms, from 4% to 25%; and for contraceptive sponges, from 15% to 30% (based on preliminary studies). Natural methods have an overall actual failure rate of 10–30% (see Table 1). Use-effectiveness rates for NFP methods depend to a large extent on whether they are being used to avoid or merely to delay pregnancy. For example, in one study, the actual failure rate for couples using the symptothermal method to avoid pregnancy was 2.8%, while the rate for those wishing to delay pregnancy was 13.3% (*7*).

Cost-effectiveness

There is little information on the cost of training NFP teachers and users and providing follow-up services, the

Table 1. Effectiveness of natural family planning methods

Source	Place	Details of study	No. of cycles (c) or months (m)	No. of unplanned pregnancies	Failure rate (per 100 woman-years)	Method used
Klaus et al. (1979) (*2*)	USA	Prospective study, 1090 new and experienced users	12 283 (c)	209	20.4	cervical mucus
Marshall (1985) (*3*)	England	Prospective study, 108 women	2 109 (c)	7	4.0	cervical mucus, basal body temperature
Mascarenhas et al. (1979) (*4*)	India	Prospective study, 3580 'acceptors' (not defined)	39 967 (c)	176	5.3	cervical mucus
McCarthy (1981) (*5*)	USA	Prospective study of 83 experienced users	NR[a]	45	NR[a]	cervical mucus, basal body temperature
Medina et al. (1980) (*6*)	Colombia	(*a*) Prospective study, randomized: 277 new users	1 967 (m)	61	37.2	cervical mucus
		(*b*) Prospective study, randomized: 286 new users	1 882 (m)	54	34.4	cervical mucus, basal body temperature, calendar calculation

Rice et al. (1981) (*7*)	Canada France Mauritius USA	Prospective study, 905 women	19 583 (c)	96	5.9	cervical mucus, basal body temperature, calendar calculation
		(*a*) substudy 341 spacers	6 142 (m)	68	13.3	cervical mucus/basal body temperature
		(*b*) substudy 548 limiters	12 069 (m)	28	2.8	calendar calculation
Wade et al. (1980) (*8*)	USA	(*a*) Prospective study, randomized: 573 new users	3 223 (m)	94	35.0	cervical mucus
		(*b*) Prospective study, randomized: 590 new users	3 399 (m)	47	16.6	cervical mucus, basal body temperature, calendar calculation
WHO (1983) (*9*)	El Salvador India Ireland New Zealand Philippines	(*a*) Prospective study, 869 new users	2 701 (c)	45	21.7 (13 months)	cervical mucus
		(*b*) Prospective study, 725 successful users	7 514 (c)	130	22.5 (13 months)	cervical mucus

[a] NR = not recorded.

difference between the cost of adding NFP services to an existing programme and that of creating a single-service programme, the number of NFP users who use the methods successfully over a number of years, and the cost of births avoided. NFP services have often been provided by volunteers and, in many cases, record-keeping has been sporadic. Most of the data that are available have been gathered recently on new NFP users; continued research is essential.

However, it is clear that NFP users must be taught to use the method, and this can be expensive. Often, one teacher teaches one user or couple at a time. Training can take 3–4 months (or cycles), and instructional materials (charts, booklets, user record charts, etc.) are required.

However, some aspects of natural family planning may offset costs of training. NFP instructors need not be medically trained. Often, successful NFP users will offer (or can be recruited) to become NFP teachers and to teach as unpaid volunteers. Once the methods have been learned, the cost of continued use is low since the user needs only a pencil, a paper chart and, for the basal body temperature and symptothermal methods, a thermometer. Some NFP service providers believe that there is only a limited need for follow-up to ensure that users continue to practise the method correctly, but further research on long-term NFP use is required.

Potential demand

Virtually all couples who want to plan their family can use NFP. A couple's chance of using NFP successfully increases if they are highly motivated and enjoy good mutual understanding and communication. The level of formal education does not appear to be a factor in a person's ability to learn NFP. In a WHO five-country study (*10*), 93% of the women, representing a wide range of socioeconomic and educational levels, were able to identify correctly fertile and infertile phases during the first cycle following instruction in the ovulation method. In one centre, 48% of the women were illiterate, and were as successful as women with postgraduate education in two other centres.

Breast-feeding mothers and women with irregular cycles (e.g., women who are premenopausal or women who have recently stopped using hormonal contraception) are also able to learn and use modern NFP methods which, unlike the rhythm method, do not depend on regularity of cycle length. Research is currently underway to examine more precisely the evidence for successful use of NFP by such women.

It is difficult to determine how many women currently use NFP, let alone how many would be interested in NFP if it were offered. Existing NFP services do not regularly report numbers of users to a central office, nor do they necessarily keep statistics on all users. Other users may learn NFP methods outside of organized services and, therefore, are not known to these services. A rough, and probably low, estimate of the total number of women using periodic abstinence is 10–15 million (*11*). However, the majority of these women probably use some version of calendar rhythm rather than the newer NFP methods.

Some data are available on the number of women using some form of contraception and using NFP (Table 2).

As information on use of NFP is more systematically gathered, it is possible that more NFP users will be identified. It is also likely that as NFP services are offered more widely the number of people using NFP will increase.

Table 2. Women using some form of contraception and natural family planning, as a percentage of the total female population of reproductive age[a]

	Percentage of women of reproductive age using contraception	
Country	All types	NFP
Bangladesh	17	2
Brazil (State of Paraíba)	15	7
Haiti	22	4
Kenya	16	1
Peru	41	17
Philippines	24	9
Sri Lanka	24	13

[a] From: LANCTOR, C. A. ET AL., ed. *Natural family planning: development of national programs*. Washington, DC, International Federation for Family Life Promotion, 1984.

Service options

The provision of appropriate health services for all should be the goal of an active health care programme. The strength of a maternal and child health and family planning programme lies in its ability to meet the varying needs of women and couples. NFP can add to this strength because it will allow the programme to offer an additional, safe, family planning option. Even if the need for NFP is not apparent in a community, the family planning provider should be sufficiently familiar with the methods to be able to explain them briefly to potential clients, and to refer those who express interest to an NFP service.

Comprehensive family planning programmes can add NFP services by training existing staff, hiring NFP instructors, coordinating development of services with local NFP service providers, or organizing a cross-referral system between maternal and child health care and family planning programmes and existing NFP services. Governments may wish to support the development or expansion of private or nongovernmental services.

NFP is a very practical alternative when professional health care resources are limited, equipment is in short supply, and contraceptive supplies are unavailable or unreliable. Personnel providing NFP services do not need to be medically qualified. In fact, most NFP services in both developed and developing countries over the last 15 to 20 years have been provided by volunteers who, for the most part, were NFP users who then trained to be teachers.

Support for NFP services, when available, has usually come from nongovernmental sources. Some government funding was provided to services in Australia, Canada, France, Kenya, Kiribati, Mauritius, New Zealand, Papua New Guinea, the Philippines, Tonga, the United Kingdom, and the United States of America, and NFP is specifically mentioned in family planning or related legislation in several countries, including Argentina, Brazil, Chile, Ireland, the United States of America, and Zambia. Further expansion of NFP services was encouraged by the United Nations during the 1984 International Conference on Population in Mexico, when delegates issued a formal recommendation advising governments to make information and education

related to family planning, including NFP, universally available. The recommendations also included a request for an allocation of resources for research leading to a better understanding of the woman's fertile period.[1]

[1] *Report on International Conference on Population, 1984*. New York, United Nations (document no. E-Conf-76-19).

2. Natural family planning methods

All family planning methods, regardless of whether they are intended to prevent or achieve pregnancy, are based on what is known about fertility. Natural methods make use of the naturally occurring signs of fertility to help a couple choose when to avoid intercourse if they want to avoid having a child. The same signs can be used to help a couple choose when to have intercourse if they want to have a child. Successful natural family planning requires a good understanding of the process of human reproduction and of the signs of fertility in the woman.

Human reproduction

Reproduction depends on the fertilization of an egg by a sperm. Once the egg has been fertilized, it implants itself in the woman's womb and begins to develop.

Male reproductive physiology

The male reproductive organs are shown in Fig. 1. Once a male reaches puberty, his testicles begin to produce sperm, and continue to do so throughout his life. When a man has intercourse, sperm floating in semen are ejaculated out of his penis into the woman's reproductive tract. In most cases, a single sperm can live for anywhere from 24 to 120 hours. Millions of sperm are ejaculated at one time, but whether or not any one particular sperm can reach and fertilize an egg depends on many factors — whether the sperm is strong enough to survive the trip up the female reproductive tract, how quickly the sperm can move, whether the fluids in the female reproductive tract provide enough nourishment, and so on.