Manual of Family Planning for Doctors, H.E.O.s and Nurses in Papua New Guinea
Manual of Family Planning for Doctors, H.E.O.s and Nurses in Papua New Guinea

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Papua New Guinea
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PREFACE TO THE FIRST EDITION

Papua New Guinea has been a world leader in establishing standard management manuals for health workers. The standard management books in paediatrics and adult medicine have been in use for many years: they have undoubtedly been instrumental in producing more effective management of patients in those areas.

This standard management manual in family planning has been written by Dr. Glen Mola based upon the National Family Planning Guidelines. Any comments should be sent to Dr. Glen Mola at Port Moresby General Hospital, Free Mail Bag, P.O. Boroko, NCD, Papua New Guinea.

The protocols, techniques and management regimens in this book are simple and effective. It is recognized however that sometimes doctors advising and managing certain clients will use alternatives to those described in this book. In these circumstances it is a good idea to make it clear to other family planning workers the reasons for varying standard practice.

In the draft stage, this pocket book was reviewed by a committee of 11 health workers with wide and varied experience of family planning practice in Papua New Guinea; I would like to thank the members of this committee for their constructive comments and advice on the draft. Many of their suggestions have been added to the text. The committee members were Dr. Meshak Lamang, Dr. Onne Rageau, Mrs. T. Hairoi, Mrs. A. Kitoneka, Mrs. M. Bouraga, Ms. B Jekes, Ms. R. Lapan, Mrs. R. Konilio, Mrs. S. Gideon, Mrs. Mioko Manoa, Ms. Jelilah Unia-Ballinger.

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1995
PREFACE TO THE SECOND EDITION

The second edition of the PNG Family Planning Manual has been written at a time of very rapid national social and economic changes. Since the first edition in 1997, the risk of maternal death for PNG women has more than doubled (MMR has increased from 370 to 733), urban areas have expanded enormously by immigration and natural growth patterns. The capacity and effectiveness of rural health services have deteriorated. While provincial hospital maternity units are very busy and in some cases are unable to cope with the numbers of women seeking pregnancy care, the overall proportion of women with access to skilled birth supervision has dropped from 60% to 36% (NDOH HIS 2006)

During this same period the total fertility rate (TFR) has dropped from 4.8 to 4.3 but the proportion of women using a modern method of family planning has not increased. Nevertheless, both the 1966 and 2007 Demographic Health Surveys (DHS) reveal that women by and large have one more baby than their ideal family size. This shows that there is a large un-met need for family planning in the country.

It is clear that family planning is one of the most effective means of health promotion for women and families and also the most cost-effective strategy for the prevention of maternal mortality and pregnancy related morbidity. Therefore it is sensible and logical to promote family planning from both a personal health care point of view and a public health perspective.

This manual has been revised by a committee of Papua New Guinea Society of Obstetrics and Gynaecology headed by Dr. Ligo Augerea and comprising Professor Glen Mola, Dr A. B. Amoa, Dr Aafke Justesen and Dr Gwenda Tabagua.

Financial support for the development and publication of the manual has been provided by the United Nation Fund for Population Activities (UNFPA) and the National Department of Health (NDOH)

October 2008
# ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired immuno deficiency syndrome</td>
</tr>
<tr>
<td>APH</td>
<td>Antepartum Haemorrhage</td>
</tr>
<tr>
<td>BBT</td>
<td>Basal body temperature</td>
</tr>
<tr>
<td>BP</td>
<td>Blood pressure</td>
</tr>
<tr>
<td>CBD</td>
<td>Community based distribution</td>
</tr>
<tr>
<td>Cx</td>
<td>Cervix</td>
</tr>
<tr>
<td>DMP</td>
<td>Depo Provera injection</td>
</tr>
<tr>
<td>D/Saline</td>
<td>Dextrose 4.3% in N/5 Saline</td>
</tr>
<tr>
<td>FP</td>
<td>Family planning</td>
</tr>
<tr>
<td>FSH</td>
<td>Follicle stimulating hormone</td>
</tr>
<tr>
<td>GC</td>
<td>Gonorrhoea/Gonococcus</td>
</tr>
<tr>
<td>GnRH</td>
<td>Gonadotrophin releasing hormone</td>
</tr>
<tr>
<td>HBV</td>
<td>Hepatitis B virus</td>
</tr>
<tr>
<td>HCG</td>
<td>Human chorionic gonadotrophin</td>
</tr>
<tr>
<td>Hct</td>
<td>Haematocrit</td>
</tr>
<tr>
<td>Hgb</td>
<td>Haemoglobin</td>
</tr>
<tr>
<td>HIV</td>
<td>Human immunodeficiency virus</td>
</tr>
<tr>
<td>HSV</td>
<td>Herpes simplex virus</td>
</tr>
<tr>
<td>IgA</td>
<td>Immunoglobulin A</td>
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<tr>
<td>IUD</td>
<td>Intrauterine device</td>
</tr>
<tr>
<td>JHPIEGO</td>
<td>Johns Hopkins Program for International Education in Obstetrics &amp; Gynaecology</td>
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<tr>
<td>LH</td>
<td>Luteinizing hormone</td>
</tr>
<tr>
<td>LMP</td>
<td>First day of last menstrual period</td>
</tr>
<tr>
<td>NET-EN</td>
<td>Norethindone enanthate (Norethisterone enanthate)</td>
</tr>
<tr>
<td>NFP</td>
<td>Natural Methods of Family planning</td>
</tr>
<tr>
<td>N/Saline</td>
<td>Normal Saline</td>
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<tr>
<td>OCP</td>
<td>Oral contraceptive pill</td>
</tr>
<tr>
<td>PID</td>
<td>Pelvic inflammatory disease</td>
</tr>
<tr>
<td>PNG</td>
<td>Papua New Guinea</td>
</tr>
<tr>
<td>PPH</td>
<td>Post Partum Haemorrhage, measured blood loss greater than 500ml</td>
</tr>
<tr>
<td>PVI</td>
<td>Povidone iodine</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>PET</td>
<td>Pre-eclampsia</td>
</tr>
<tr>
<td>PMS</td>
<td>Pre-menstrual Syndrome</td>
</tr>
<tr>
<td>prn</td>
<td>as required</td>
</tr>
<tr>
<td>qid</td>
<td>6 hourly</td>
</tr>
<tr>
<td>STI</td>
<td>Sexually transmitted Infection</td>
</tr>
<tr>
<td>SRM</td>
<td>Spontaneous rupture of the membranes</td>
</tr>
<tr>
<td>tds</td>
<td>8 hourly</td>
</tr>
<tr>
<td>TL</td>
<td>Tubal ligation</td>
</tr>
<tr>
<td>TSS</td>
<td>Toxic shock syndrome</td>
</tr>
<tr>
<td>VD</td>
<td>Venereal Disease (same as STI)</td>
</tr>
<tr>
<td>WBC</td>
<td>White blood count</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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GLOSSARY AND DEFINITIONS

Abortion -- delivery of an embryo or fetus weighing less than 500g.

Antisepsis -- is infection prevention by killing or stopping growth of germs on skin or tissues.

Asepsis and aseptic technique -- are terms used to describe efforts to prevent entry of germs into the body by reducing their numbers to a safe level: eg. hand washing and cleaning of instruments.

Cleaning -- is the process which removes visible body fluids and dirt from skin or objects.

Decontamination -- is the process of making things safer to handle by clinic staff: eg. instruments and tables after they have been contaminated by clients' body fluids.

Disinfection -- is the process of getting rid of most (but not all) disease causing germs from objects. High level disinfection (HLD) through boiling or the use of chemicals gets rid of all bacteria from objects except spores.

Gravidity (G) -- total number of pregnancies.

Low Birth Weight (LBW) -- birth weight less than 2500g.

Maternal Mortality (MM) -- deaths of mothers from a cause while pregnant or within 6 weeks post partum.

Micro-organisms (germs) -- are the agents that cause infections. They include bacteria, viruses, fungi and parasites.

Normal flora -- are germs which are not pathogenic in their usual places (ie. do not cause sickness); however, if they are introduced to a site where they should not be, they can cause infection eg. skin bacteria injected through the skin can cause an abscess.

Parity (P) -- number of prior pregnancies with delivery of babies over 500g.

Perinatal Mortality (PNM) -- stillborns plus early neonatal deaths.
**Sterilization** -- gets rid of all micro-organisms including bacterial spores from objects.

**Stillborn (SB)** -- baby born without a heartbeat weighing over 500g.

**Very Low Birth Weight (VLBW)** -- birth weight less than 1000g.
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<td></td>
<td>- breast feeding pill</td>
<td></td>
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<tr>
<td></td>
<td>- combined pill</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- morning after pill</td>
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<td>10</td>
<td>Contraceptive injections; Depo Provera and Noreisterat</td>
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<tr>
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INTRODUCTION

This pocket book has been written to act as a companion to the `National Family Planning Guidelines' reference manual. Because of its size the `guidelines' will be kept on the shelves in the nurse tutor's office, the health centre library or the family planning clinic OIC's office. It is hoped that this pocket book will be carried around by all health workers: particularly those not in full time family planning work for use as a quick reference for advising patients and clients about their family planning needs.

Family Planning family improves the health of women, infants and the unborn baby. Health workers should see family planning as a preventative health measure just as much as antenatal care, immunization and the malaria control program. Family Planning should be promoted in the community with the same conviction and vigor as other health promotion activities. The fact that family planning often involves discussion of matters related to sex must not inhibit health workers bringing up the topic with their clients and patients, but it does mean that all health workers need to develop a sensitive style in discussing this topic.

Aims of the Manual

- Standardise the medical component of family planning services irrespective of varying approaches and settings for services throughout PNG.
- Provide a reference to service providers, trainers and administrators with easily accessible information regarding facilities, counseling, infection prevention and the role of breast feeding in family planning programs.

Consent and Eligibility for Family Planning

The control of fertility is a basic human right. In a free and democratic country like Papua New Guinea all adults should have the knowledge to seek out and use family planning services, and the government (particularly the Health Department) has a responsibility to provide family planning services which are accessible to all citizens. In Papua New Guinea the legal age of adulthood is 16 years. Thus family planning can be provided without reference to any other person (either parent or spouse) for all persons of at least 16 years of age. However, it is wise to involve guardians or spouse in most family situations (see chapter 13 page 6 for more guidelines about the consent issue).
Why Family Planning is Important
Family Planning improves the health and saves the lives of children and women. Family Planning is necessary for the physical, emotional psychological and financial well being of the family. Family planning is necessary for the socio-economic development of the community.

Since independence some 32 years ago the population has increased from 2 to over 6 million; this represents an annual rate of population increase of about 2.7%. No country in the world can keep up with such a fast rate of population growth and maintain standards of living, education and health services. It is a simple fact that if population growth rates outstrip economic development, standards of living of the people go down. The social well being and standard of living in Papua New Guinea in the next generation will depend upon limiting our rate of population increase to a level which we can economically cope with. There would be very few rascals in our communities if there were sufficient jobs and useful activities for all school leavers.

Family Planning for Promoting Health of Women and Children
Mortality among women and children in Papua New Guinea is high. Whereas the maternal mortality ratio in the developed world is less than 10/100,000 live births, the ratio for Papua New Guinea is 733/100,000. During her lifetime, the average Papua New Guinean woman faces a 1 chance in 22 that pregnancy or childbirth will cause her death; this compares with a 1 in 500 chance for a woman in the developed world. Similarly, child and infant mortality in Papua New Guinea is high; children have a better chance of survival if they are well spaced.
Lack of family planning use places women and children at risk of death and poor health because the following risk situations commonly arise:

- pregnancy occurs when the woman is too young, ie. less than 18 years of age,
- a woman has too many births, ie. more than four,
- women have children too close together, ie. birth intervals of less than 2 years,
- women continue to have pregnancy when they are too old to safely do so, ie. after 35 years,
- women continue to have pregnancy when there are serious medical risk factors present, eg. diabetes, heart disease or severe anaemia,
- pregnancy occurs when it is unplanned, unwanted or the woman has no means to support the child when it is born, eg. an unmarried young girl living away from home.

These poor family formation practices are known to result in unnecessary deaths and poor health among mothers, their already born children and the child in the womb.

By preventing at risk pregnancy family planning will reduce maternal, perinatal and child deaths and poor health, create happier families, and slow down our high rate of population growth which is impeding our socio-economic development.

**Men’s involvement in Reproductive Health and Family Planning**

Men have a lot to gain from Family Planning too. Most men are quite clear about the fact that they are responsible for support of their family. In modern times this can put a lot of pressure on a man to provide all the things that a family needs. Now that male methods of FP (condoms and vasectomy) are becoming quite popular, men also have their own option for family planning use. In the past, men have been largely ignored by health workers in clinics. On the other hand, men see themselves as important in the family decision making processes. If family planning is to be successful in PNG, men must be involved. If you have a men’s clinic in your health center, make sure you spend time talking to the clients and helping them to have a good reproductive health and be involved in family planning including vasectomy. Make men welcome. Involve them in other regular clinic activities. Invite them to accompany their wives
to the antenatal clinic and the delivery room to support their wives in labour and, of course, to the family planning clinic to access condoms and get vasectomy

**HEALTH WORKERS SHOULD ASK ABOUT FAMILY PLANNING NEEDS IN EVERY ENCOUNTER WITH PATIENTS AND CLIENTS.** Do not wait to be asked. Most Papua New Guineans are too shy to request family planning assistance. Indeed family planning should be part of every consultation. An especially important time to offer a woman family planning is when she brings her baby to see you at the well baby clinic (immunization and weighing) or for even for an infant illness. No woman wants to get pregnant when she has a new baby to breast feed and look after.

Modern family planning methods are safe; far, safer than high-risk or unplanned pregnancies. Indeed it is safer to use any modern method of family planning for more than 10 years than to have just one normal pregnancy! The decision to use family planning is the right of every person. It is up to us health workers to make sure that family planning information, education and counselling services are available to as many Papua New Guineans as possible.

Chapter 2

**Organizing & Managing Family Planning Services**

* Family planning is for all
* Clinic and community based distribution
* Ordering and storing family planning supplies

The National government supports family planning for all adults. It is the responsibility of all health workers to integrate family planning into their work no matter in what area of the health service they are employed. Surgeons and children’s clinic sisters especially need to think about family planning for their patients. Who wants to become pregnancy just after an operation or when one of your babies is ill. However, most Papua New Guineans, particularly of the older generation value more children, but do so without knowing the effects of excessive or inappropriate fertility on the health of mothers and children.

Family planning workers need to take many local factors into account,

- the education and socio-economic level of the people (especially of the women) of the area,
- whether one is dealing with urban or rural people,
- what the general community feeling towards family planning is, including the religious influences in the community,
- whether traditional family planning is used or not,
- the community 'needs', ie. whether there are many unwanted or unintended pregnancies occurring in the community, and the rate of maternal and perinatal and childhood death in the community.

**Clinic and Community Based Family Planning Services**

Both clinic and community based family planning services need to have a referral system so that they can send clients to a more specialized center should problems with a method arise. The first 'golden rule' of Family Planning is **never** send someone away who has come seeking family planning without giving them some contraceptive help. If you are not able to provide what the client wants today, at least give them an alternative (eg. condoms) until you are able to supply the method they need or want.

**Clinic based services**

In Papua New Guinea aid posts and other clinics usually provide Depo provera, pills, condoms, advice on natural methods and referral for those seeking sterilization. IUDs are only supplied by those clinics where there are staff trained to insert them.

Condoms are also an important way of preventing the spread of STDs including AIDS. Clinics should stock and promote the use of condoms, by having packets of condoms available for distribution on the front counter. There is no need to register condoms individual users as family planning clients.

Clinics can either be **integrated** (ie. MCH/FP) or only provide family planning services. In many smaller centers it is best to run integrated clinics so that all services are available to people every day; however, in busier urban centers integrated clinics can often mean that family planning is left out because there is insufficient time to provide it. It is NOT good to have family planning available on only one day per week!

**Private doctors** are to be encouraged to provide family planning services to their clients. All rural aid posts should be encouraged to provide family planning. Suitable methods for distribution at aid posts include pills, injections and condoms.

**Community based services**
Many people in our nation do not routinely use health services or have no access to them. Community based services have the advantage of taking the services to the people rather than waiting for people to present to the service. People never request things they are ignorant of. There are many different ways of taking family planning advice and services to the community. Methods which have been tried in various parts include,

- making contraceptive methods available in shops and stores. Condoms and pills can be safely distributed thus,
- going to schools and other institutions to educate and, where appropriate, distribute contraceptive methods,
- outreach, or home visiting facilities of a family planning clinic,
- mobile clinics which take services to villages and settlements.

Whether family planning services are clinic or community based needs to be decided by local health managers depending upon the local situation. In most areas of PNG it has been found that the most efficient way of spreading family planning services amongst the people has been to make use of existing outlets and facilities.

Family planning workers should make use of social organizations such as women’s groups, church groups and youth groups etc. to educate people and distribute contraceptive methods. Schools and Colleges should be visited and encouraged to include family planning topics in their family life classes: often teachers will gratefully accept an offer from a health worker to take or at least participate in such a class. Health workers should try and make sure that family planning is part of their every day routine no matter what area of health they are specifically involved in. Antenatal clinics, children's clinics, paediatric and nutrition wards, post-natal and gynaecology wards are ideal places for health workers to promote and distribute contraceptive advice and methods.

**Ordering and Storing Contraceptives**

1. Order supplies in time so that they do not run out. (See National Guidelines for information about how to calculate supplies needed.)

2. Store supplies in a well ventilated dry area and protected from sunlight.
3. Do not stack more than 2.4m high and keep 30cm from wall and 10cm from roof.

4. Stack supplies so that older ones are at the front and thus given out first.

Fig 1.

**Average Contraceptive Expiry Times (always check labels.)**

<table>
<thead>
<tr>
<th>Device</th>
<th>Date of manufacture to expiry</th>
<th>Date printed on package</th>
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<tbody>
<tr>
<td>IUDs</td>
<td>10 years</td>
<td>No</td>
</tr>
<tr>
<td>Pills</td>
<td>3-5 years</td>
<td>Yes</td>
</tr>
<tr>
<td>Depoprovera</td>
<td>5 years</td>
<td>usually,</td>
</tr>
<tr>
<td>Condoms</td>
<td>5 years</td>
<td>Yes,</td>
</tr>
<tr>
<td>Foam</td>
<td>5 years</td>
<td>No</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>3-5 years depending on climate</td>
<td>Not usually.</td>
</tr>
</tbody>
</table>
Chapter 2

RECORD KEEPING AND SCREENING

* Screening aims to select out those women at risk to side-effects
* Record keeping must not be made an obstacle to provision of Family Planning

Modern contraceptive methods are very safe. However, some women are more at risk of developing some of the rare side effects. The purpose of screening is to identify those women who are more at risk of developing side effects so that they can be counselled to use a method which will be associated with less risk of problems for them. Screening must not be made an obstacle in the way of women seeking family planning.

Some women feel a bit different or experience minor changes in bodily function when they begin a contraceptive method. This can frighten these women and can influence them to stop using family planning. Record keeping helps us to follow up and warn women of these minor and non-dangerous problems. It also identifies those who are experiencing these problems so that they can be appropriately counselled and reassured or assisted to adopt an alternative family planning method.

Clients hoping to use an IUD or undergo tubal ligation or vasectomy do need a more thorough assessment and sometimes some simple laboratory tests.

When detailed client assessment is NOT indicated, the record system must not be an obstacle to rapid service delivery, eg. there is not need to fill out record cards at all for those clients simply wanting some condoms. There should be a box of condoms on the counter of every clinic so that clients can simply take their requirements without subjecting them to an unnecessary interview. For monthly reporting purposes it is possible to work out how many condoms are being used by keeping an imprest system on the condom distribution box.

A more detailed client assessment is sometimes desirable when the family planning service is integrated into a broader public health or disease control program or for research purposes.

See the National Family Planning Guidelines for examples of the various forms used for record keeping in Family Planning in PNG.
- Department of Health, Family Planning Record Card for nurses, FPC-1,
- Department of Health, Family Planning record Card for APOs & CHWs,
- Family Planning Personal Record Card,
- Daily & Monthly tally sheet for Family Planning Services, PHD, RI/FP92.
Chapter 3

COUNSELING

Counseling is the most vital part of the whole family planning service. Good counselling helps clients to choose the right form of family planning for their own needs, what to expect if they are using a contraceptive method and therefore better use of the method, fewer clinic visits with complaints and requests for discontinuation and change of method.

Every person of reproductive age group has the right to know how to control their fertility. Pregnancy must not be seen as a 'punishment' for a person who has a sexual relationship which someone else does not approve of. Every person of legal adult age (16 years in PNG) has the right to decide for themselves whether to use family planning or not. It is up to family planning providers to assist people to make appropriate choices about their contraceptive needs based upon accurate information and understanding of the methods available.

Effective Communication Skills

You can get on better with your clients and persuade them more easily if you,
- know how and when to listen,
- address them politely by name,
- speak gently and in a kind tone of voice,
- sit at the same level as the client, lean forward when listening or talking and maintain eye contact,
- be sensitive to facial expressions and body movements, and show concern at all times.

Language and communication

Use a language that sounds the most polite at the beginning (eg. English), but readily change over to a language in which communication is easier when conversation is flowing. Be brief and use simple words. Do not use technical medical terms or jargon. Give important instructions first and repeat them. Get the client to repeat them back to you. Be specific. Tell the client exactly what to do. Allow space for the client to ask questions; encourage client participation in discussion. Be attentive to the client's needs for privacy, confidentiality and comfort.
Types of Counseling
Counseling is an on-going process. Some form of counseling should take place whenever the client visits the clinic and community counseling can be carried out whenever health workers talk to friends, wantoks, relatives or community groups.

Initial counselling
Initial counselling is mainly client education. It is very important to greet clients in a friendly manner at the first visit. Make a point of calling each client by name: this makes them feel more comfortable. Initial counselling can easily be done in groups in the clinic waiting room and should include education about,

- the benefits of family planning,
- the various contraceptive methods,
- encouragement to continue to breast feed for post-partum mothers,
- explanation about what the client can expect during her initial visit to the clinic.

Method specific counselling
In a private area, and on a one-to-one basis, method specific counselling should be given to each client just before the provision of the contraceptive of their choice; it should include,

- some questioning and discussion about specific contraceptive methods in which the client is interested,
- help in choosing a particular method which will meet the needs of the client,
- explanation about how to use the method and any side-effects which might occur.

It is usually convenient to obtain the client's history information during this time. After this part of the counseling process, perform the physical examination and any necessary laboratory tests. Frequent contact and good explanation of expected minor symptoms and side-effects leads to client satisfaction, less discontinuation of methods and builds trust between provider and client.

Follow-up counselling
The aims of counselling at the follow-up clinic are to,
- find out whether the client has any problems (real or imaginary) with the method,
- make sure that the client is using the method correctly,
- answer client’s questions and reassure her about or treat side-effects,
- provide further supplies or help the client change or stop a method.

**NOTE:** Specific points about counseling clients with regards each method can be found in the chapters about the methods.

**Community Counseling**
As a health worker you should set an example for the community, in family planning as well as in other health matters. When you talk to friends, wantoks, relatives or community groups you should not feel shy to talk about health issues particularly family planning. If you have a reputation for talking easily about such things people will feel less inhibited about coming to you for advice when they need it.

**Example of a counseling sequence**
(It is often a good idea to give the contraceptive method under discussion to the client to hold during the counseling session.)
- greet clients in a friendly manner when they arrive, be polite at all times and offer them seats, introduce yourself too,
- ask clients about themselves (if the client is new take the full history), explain that you need this information to help them choose the right method for them,
- tell clients about family planning methods and ask them which method interests them,
- do method specific counseling for the method of choice including how it works, advantages and benefits, disadvantages and possible side-effects and danger signs,
- explain how to use the chosen method, and give supplies as appropriate,
- get the client to repeat back to you important instructions and when to come back for follow up.

Not many women in Papua New Guinea are well educated with regards family planning and the various methods of contraception. Sometimes clients choose inappropriate methods and even have unrealistic fertility expectations (eg. safe pregnancies for grandmultiparas or when they are over 40 years.) For this reason it is sometimes necessary to gently direct the client towards a more appropriate method for their particular life situation: however, we can never force clients to use a particular method. Family planning workers must become expert at persuading clients to use a method best suited to their needs.
Consent

There is no legal requirement in Papua New Guinea which demands that the spouse (husband or wife) need give family planning consent. However, under normal circumstances it is important for the spouse to be involved in the decision to use family planning. Relationships will be more harmonious in a family if such important decisions are made together.

Except under emergency circumstances, signed consent for sterilization from both husband and wife should be documented in the records. However, there is no need to get a husband’s signature for TL if the woman assures you that she has discussed it with her husband especially when the husband is not present. Document this assurance in the patient’s charts.

Family planning workers need to be very sensitive and diplomatic with regards consent for family planning. The consent issue must not be made a barrier to the provision of family planning, for example, for women who are not formally married, or whose husbands are away or not willing to sign family planning consent forms. However, in most parts of Papua New Guinea it is expected that both husband and wife will agree on the decision to use family planning before the service is provided. Moreover, you can make the consent form act as an 'appointment card' or focal point to initiate discussion between husband and wife on family planning.

Many Papua New Guinea women are too shy to bring up the topic of family planning with their husbands. Women who are shy to start discussion about family planning with their husbands may find it easier if you give them a piece of paper to read. It is a good idea to give all women a family planning “appointment paper” to take home when they are discharged from the postnatal ward.

In the baby clinic you should try to provide the first “dose” of family planning at the first immunization visit and tell the woman to go to the clinic for the next injection or packet of pills in one or three months as appropriate. She can always change over to another method if subsequent discussion with her husband leads to a different method decision.
Chapter 5

CLIENT ASSESSMENT

* The different levels of client assessment related to place and method
* The Medical History: general, obstetrical, gynaecological, family planning
* General Physical Examination: general and pelvic
* Tests
* Conclusions, outcome and client plan for Family Planning
* Return or review client assessment

This chapter outlines how clients should be assessed for suitability for the various contraceptive methods. Modern methods of family planning are very safe: much safer than either pregnancy or childbirth. Client assessment can be extremely detailed and thorough or more limited depending upon the resources available at the particular clinic. However, because of the safety of modern contraceptives, more limited client assessment which is all that may be available at some rural clinics or aid posts does not usually place the clients at greater risk from their use.

Hormonal methods of contraception (injection & pills) are particularly safe and can be distributed by those clinics with very limited facilities and training. IUD and sterilization services do need more thorough client assessment for safety and for this reason are usually only provided in major health centers and hospitals. No particular client assessment is required for condoms.

The Medical History
The purpose of the history is to provide the family planning worker with background information about the client that may indicate or contraindicate suitability with regards a particular family planning method. The significance of the various parts of the history and examination can be found in the chapters on each method.

Presenting information
Name, Age, Address, Spouse’s name etc., (See `Record Keeping’, Chapter 2.)
Reason for today's visit,
Any specific problems today.
**General History**
Smoking History,
Cardiovascular problems including history of thromboembolism, heart disease and hypertension,
Organ disease including kidney problems, liver or respiratory disease,
Diabetes or cancer.
Social indicators of risk for STIs ie. unstable relationship, single woman, she does not think husband is faithful, husband drinks a lot or does not come home on some nights when he goes out etc.

**Gynaecological history**
Menstrual history including last period date, regularity, duration, amount, and cycle,
History of ectopic, pelvic infections or abnormal genital bleeding,

**Obstetric history**
Number of pregnancies, abortions, children alive and dead,
Complications of pregnancy or delivery, date of last delivery or abortion,
Breast feeding duration and frequency.
Problems with fertility in the past.

**Family Planning history**
Previous method use, dates and duration,
Reasons for discontinuation or changing methods,
Side effects or complications experienced,
Satisfaction with any method previously.

**General Physical Examination**
The aim of the physical examination is,
- to discover things which contraindicate the use of a contraceptive method,
- find any serious medical problems which need treatment,
- detect any physical abnormalities which arise whilst a method is in use.
The examination can be carried out at various levels of sophistication depending upon the facilities of the clinic and the training of the providers.
(However, because of the great safety of the hormonal methods of contraception, it is much safer for clients to use them than to get pregnant even if they have physical risk factors.)
Before commencing the physical examination prepare the client by explaining to her what is going to take place, its purpose, and to empty her bladder first if a vaginal examination is going to take place. Always conduct examinations in the most private part of the clinic. Male health workers must always have another female present for examinations.

**General Assessment**
Make general comments about the client eg. poor or good health, wasted, underprivileged. Weigh, and record the client's vital signs, ie. pulse, BP and temperature if indicated. Look for pallor of mucous membranes,

**Head & Neck**
Inspect hair quality and its distribution, eyes for jaundice, tongue for cyanosis, and face for acne & pigmentation. Examine neck for raised JVP, enlarged lymph nodes and thyroid swellings.

**Chest and Breasts**
Examine heart and lungs for any abnormalities.
Examine breasts for lumps, sores, blood stained nipple discharge and abnormal skin contour.

**Abdominal Examination**
Palpate the abdomen for enlarged liver, spleen and any other masses. Note any tenderness.

**Limbs**
Look for varicose veins of the legs, oedema of hands and feet.

**Pelvic or vaginal examination**
(This examination is only necessary prior to sterilization or IUD insertion)

1. Get all equipment ready before starting.
2. Explain the procedure to the client before you begin and keep on talking to her about what you are doing as you proceed. (Tell an anxious woman to take deep slow breaths to help her relax.)
3. Inspect the vulva for sores or lesions, the urethral opening for discharge, the cervix for any abnormal discharge or lesion (per speculum). Take any necessary swabs.
4. Bimanually note the size and position of the uterus, the feel of the cervix and the fornices for any tenderness of masses. Express any discharge from the urethra.

**Tests**
(Most family planning clients do NOT need any tests performed.)
1. Do a Pap smear where facilities are available
2. Blood for haemoglobin estimation should be taken from women who are pale.
3. Endocervical and vaginal swabs should be taken from women with abnormal cervical discharge; these swabs need to be stored and transported to the laboratory in Stuart's transport medium. (In some clinics it is possible to examine cervical and vaginal swabs immediately in the clinic. See page C-4, C-5 and C-6 of the National Family Planning Guideline for a description of the saline and Potassium hydroxide (KOH) methods for diagnosing cervical and vaginal infections.)
4. Urine can be checked for the presence of sugar and protein by dipstick.
5. The FP clinic is an ideal opportunity to offer Provider initiated counseling and testing for HIV and syphilis

Conclusions: Outcome and Plan
1. Diagnosis of any pathological condition or sickness,
2. Type of birth spacing and family planning method required; Supply it!,
3. Referral for surgical problems or sterilization,
4. Follow-up and date of next visit.

Return Client Assessment
1. Enquire about correct use of the method, problems, queries. Reassure women about minor symptoms such as nausea when they commence on OCP etc.
2. Review danger signs for the method used,
3. Measure weight and blood pressure (if equipment available).
4. Perform physical examination as necessary based upon any problems mentioned.
Chapter 5

INFECTION PREVENTION

* The aims of infection prevention
* Steps in the infection prevention process, decontamination, cleaning, disinfection or sterilization
* Protective barriers; gloves, handwashing
* Antisepsis, Hand scrubbing and skin preparation
* Processing instruments and gloves for use again
* Waste disposal
* Decontamination
* Cleaning
* Sterilization
* Disinfection: ordinary disinfection and high level disinfection
* Re-sterilizing gloves

The aim of infection prevention is to minimize the spread of infections causing wound infections, PID, gangrene and tetanus, and the transmission of STIs like HIV and Hepatitis B. Germs live everywhere in the environment. Humans carry them on their skin, in the genital and respiratory tracts and the intestine. These are called normal flora. Normal flora are not pathogenic (ie. do not cause disease) in their usual places; however, if they are placed where they should not be they can cause infections. Some germs are so pathogenic that they can cause disease in any place in the body.

Steps in the Infection Prevention Process
Most viruses and bacteria are relatively easy to kill; however, tuberculosis germs are more difficult and some bacteria form spores (which have a protective coating); these are particularly difficult to kill. Infection prevention often relies upon placing protective barriers (eg. gloves) between the germs and the client/health worker.

Preparing instruments etc. for use
- decontaminate,
- clean,
- high level disinfection or sterilization

When and where to use these processes are summarized in Fig. 2 (below).

Protective Barriers
Stopping spread of infection by placing a barrier between the health worker and the client is an effective method of disease prevention, eg. wearing gloves for procedures or when handling dirty instruments and linen, hand washing and using antiseptic solutions for cleaning wounds and preparing the skin prior to surgery.

**Handwashing**
- handwashing is the single most important procedure to prevent infection.
- handwashing should be performed
  - before and after every direct contact with the patient,
  - after handling objects that may be contaminated,
  - after removing gloves, because gloves may have invisible holes or tears.

To make sure that it is possible for clinic staff to wash hands whenever necessary, it is vital that OICs and managers provide a supply of water, soap and hand towel. If there is no running water available then buckets of water for lathering and rinsing can be used, or alternatively hands may be rubbed with an alcohol/glycerol mixture or `Hexol'.

Fig 2.

**Decontamination, High Level Disinfection and Sterilization**

<table>
<thead>
<tr>
<th>Body site &amp; tissue to be handled</th>
<th>Appropriate Infection Prevention Process</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open surgical wounds, eg. tissues beneath the skin</td>
<td>Sterilization (destroys germs including spores).</td>
<td>Instruments for surgery: needles and syringes.</td>
</tr>
<tr>
<td>Intact mucous membranes eg. mouth &amp; vagina.</td>
<td>High level disinfection (HLD) destroys all germs except spores.</td>
<td>Specula, uterine sounds &amp; gloves for IUD insertion.</td>
</tr>
</tbody>
</table>
**Gloves**

Gloves should be worn whenever there is contact with body fluids of a client. A separate pair of gloves should be worn for each client.

I) Single use disposable plastic gloves can be used for pelvic examinations and cleaning activities,

ii) High level disinfected gloves should be used for inserting IUDs* and dressing wounds,

iii) Sterile gloves should be used for surgical procedures and inserting IUDs,

iv) Thick household gloves can also be used for cleaning activities.

* Clean gloves are adequate for IUD insertion if the IUD can be loaded in the packet with `no touch technique'.

The steps for processing reusable gloves are outlined at the end of this chapter.

**Antisepsis**

- Infection from skin bacteria can be introduced by invasive procedures such as injection and IUD insertion. Cleaning the client's skin with an antiseptic solution is an important disease prevention measure.

- Because they are used on skin and mucous membranes, antiseptics are generally mild and do not have the same killing power of chemicals used for disinfection of instruments. Antiseptics do not kill mycobacteria or bacterial spores.

- Commonly used antiseptics used in PNG are alcohol, iodine solutions, acriflavine solution & emulsion, cetrimide (Savlon) solutions, chlorhexidine (Hibitane) solutions, chloroxylenol (Dettol) solutions, hexachlorophene (Phisohex). (Avoid the use of Zephiran (benzalkonium chloride) solutions as they are not effective in killing many germs quickly. Mercurial compounds should also be avoided as they can be toxic to the client.)

a) **Handscrub.** Rinse the hands, then lather the hands for 30 seconds with soap, then rinse the hands again. (It is important to keep the nails short and clean at all times.) To increase the antisepsis of the hands rub the scrubbed hands with an alcohol solution, eg. Hexol.
b) **Client skin preparation prior to surgical procedures.** Only remove hair when absolutely necessary: shaving abraids the skin and increases the risk of wound infections. Clip hair close to the skin rather than shave. Wash the skin with soap and water if visibly dirty. Rub off sebaceous secretions with an alcohol solution and then paint with iodine solution. (Before using Iodine solutions check that the client is not allergic or sensitive to iodine.) Iodine needs to be left on the skin for 3 minutes to provide adequate antisepsis.

c) **For injections,** remove any visible dirt with soap and water, clean the injection site with fresh cotton swab soaked with 60-90% ethyl alcohol or isopropyl alcohol. Allow the alcohol to dry before giving the injection.

d) **For IUD insertion**

- clean the cervix with an appropriate solution available (eg. iodophor "Betadine" or Chlorhexidine/Cetrimide "Savlon"). Wait for 1 minute for the antiseptic to act before proceeding.
- Do not use alcohol as an antiseptic for the cervix. It is not necessary to apply the antiseptic to the outer genitalia.

All antiseptics can become contaminated with germs. This can be prevented by using small containers, not storing cotton-wool or gauze in liquid antiseptics, establishing a routine for checking and changing containers every week, storing antiseptics in cool dark cupboards, by pouring the antiseptics out of the container rather than applying the swab to the lip of the bottle.

**Processing instruments, gloves and other items for use again**

Whenever a procedure is completed the health worker should follow a set routine involving waste disposal, decontamination, cleaning and rinsing of gloves and instruments, and sterilization or high level disinfection.

a) **Waste Disposal**

Whilst still wearing gloves, the health worker should dispose of contaminated objects, swabs etc. into a rubbish bin which has been lined with a plastic bag. Next all disposable sharps (eg. scalpels, needles, etc.) should be disposed of into the sharps container (old plastic cordial bottles are ideal).

b) **Decontamination.** (Do NOT use skin antiseptics such as Savlon for decontamination.)
This is the first step in handling used instruments and gloves. Decontamination kills harmful viruses particularly Hepatitis B and HIV and makes cleaning of the items safe for staff. Soak all items to be reused in 0.5% Chlorine Solution for 10 minutes for effective decontamination. This solution can be prepared by diluting household bleach 1:9 with clean water. After decontamination items should be rinsed and then cleaned, use either disposable plastic gloves or household rubber gloves. Surfaces can be decontaminated by wiping them with the same 0.5% Chlorine solution.

(Note that the Chlorine solution is stable (ie. active) for only about 2-3 hours: fresh solutions need to be made up regularly.)

c) **Cleaning**
This is a crucial step in making instruments safe and preventing spread of infection. All blood and body fluids must be thoroughly removed from gloves and instruments. Gloves can be cleaned easily by washing gloved hands under the tap after a procedure; instruments can be scrubbed with a toothbrush in soapy water. Cleaned instruments and gloves should then be rinsed in running water to remove traces of soap.

d) **Sterilization**
This can be either by steam under pressure in an autoclave or by dry heat in a sterilizing oven. Sterilized instruments should be used immediately or, if wrapped, within a week. Enclosing wrapped sterilized packs in a sealed plastic bag will increase their shelf life to one month.

*Steam Sterilization:* Should be at 121C at 106kPa for 20 minutes for unwrapped items and 30 minutes for wrapped items. Items should be allowed to dry before removing them from the sterilizer.

*Dry Heat:* 170C for one hour (not including the heating up time and cooling down time) or at 160C for two hours.

*Chemical sterilization* is an alternative to steam and dry heat sterilization. Soaking for 8 hours in Glutaraldehyde (Cidex) or in formaldehyde for 24 hours will sterilize instruments which cannot withstand heat. Instruments need to be rinsed in sterile water or Normal Salines after chemical sterilization.
e) **High level disinfection (HLD)**

This kills all germs except for bacterial spores. In family planning clinics HLD is acceptable for preparing instruments for IUD insertion and laparoscopes for sterilization. High level disinfection can be either by:

a) **Boiling:** Items must be able to withstand boiling for 20 minutes, timing should commence when the water has started to boil. The pot should be covered with a lid and all items must be completely covered with boiling water. Items should be dried in air before use or storage.

b) **Chemical:** For HLD use Cidex for 10 minutes or formaldehyde solutions for 20 minutes, then rinse well with boiled water. Items must be rinsed after soaking in these chemicals to remove toxic residues.

Note about Containers for High Level Disinfection:
1. The high level disinfected container should be prepared by filling it with 0.5% Chlorine solution and soaking it for 20 - 30 minutes. (The chlorine solution can be transferred to a plastic container for reuse.) Rinse thoroughly with boiled water. Air dry before use.
2. To minimise lime deposits from forming on the instruments:
   a. Boil the water for 10 minutes at the beginning of each day. Before adding instruments allow the lime deposit to settle to the bottom of the container. As the day goes on, add only enough boiled water to keep the instruments fully submerged.
   b. Drain and clean the boiler or pan at the end of each day.
3. The instruments can be stored for one week. The container should not be opened often. If the contents become contaminated, all of them need to undergo repeat high-level disinfection. Write the date of the high level disinfection on the outside of the container each time it and its content undergo high level disinfection.

Some antiseptics which are adequate for cleaning the skin are not appropriate for disinfecting instruments and gloves, eg. Savlon, Cetimide, Zephiran, acriflavine, Dettol, Eusol, alcohol, Phisohex and gentian or crystal violet solutions. Lysol (carbolic acid) and Phenol are low level disinfectants and can be used to decontaminate surfaces when Chlorine solutions are not available.
Re-sterilizing gloves

1. Decontamination and cleaning of the gloves. Before removing the gloves put your gloved hands into a bucket of 0.5% Chlorine (1 part household bleach to 9 parts water). Wash the gloves in soapy water. Rinse the gloves and test them for holes by filling them with water and watching for any water to leak out. Hang gloves up to dry.

2. Sterilization of gloves. When the gloves are dry they should be packaged with cuffs rolled down and gauze tucked under cuffs so as to allow good steam penetration. Do not autoclave at pressure at more than 106kPa as this destroys the gloves. Autoclaved gloves should not be used for 48 hours as they tear easily if used straight after steam sterilization.

3. High level disinfection of gloves. Boil the gloves for at least 20 minutes by placing them in a bag of plastic netting with a weight in it. Immerse the bag in a large saucepan with a lid on it. Boil the water for 20 minutes. Hang the gloves to dry and place in a sterile container. Use gloves immediately or cover and keep for up to one week.
Chapter 6

NATURAL METHODS OF FAMILY PLANNING

* The principle of NFP and traditional support for the methods
* Key concepts of reproductive physiology for NFP
* Counselling for NFP
* Advantages and Disadvantages
* Indications and Contraindications to use
* Effectiveness
* Client instructions and Follow up
* Other (not so effective) methods of NFP

The **principle** of natural methods of family planning (NFP) is that sexual intercourse is avoided during the fertile times of a woman's cycle. For this reason some people call these methods `Periodic Abstinence'.

**Traditionally** pregnancies were spaced and family size limited in Papua new Guinea by various natural methods of family planning. In traditional times a woman rarely became pregnant within 3 years of a live birth, and completed family size rarely exceeded four live children.

**Traditional practices** which resulted in good birth spacing and limits to family size included,
- abstinence from sex post-partum until the baby stopped breast feeding due to beliefs that semen could poison the breast milk and that sex in the post-partum period could damage a man's virility and strength,
- shame associated with a mother becoming pregnant before the child can walk unsupported or is able to call the names of family members correctly.

Although there may not have been good physiological understanding as to how these traditional practices spaced births, they were largely successful and have resulted in a long history of family planning practice in Papua New Guinea.

Certain **religious groups** do not support the use of artificial methods of contraception, but do promote natural methods. Use of natural methods of family planning can help a woman understand the workings of her own body and particularly the menstrual cycle and the process of ovulation.
**Key Concepts of Reproductive Physiology for Natural Family Planning**

a) The menstrual cycle begins on the first day of bleeding and ends on the day before the next period begins. A woman's cycle may vary a few days each month, and normal cycles may vary from 22 to 35 days long, although the average is 28 days.

b) Cervical mucus is affected by the amount of oestrogen present. As the Graffian follicle matures in the ovary it releases more oestrogen, this makes the cervical mucus, - more in amount and more watery or 'slippery' in quality such that it takes on the consistency of egg white. This type of mucus allows sperms to travel through the cervix and live in the woman's reproductive system for up to 5 days.

c) Ovulation can occur at any time during the menstrual cycle; however, it usually occurs 14 days before the onset of the next period. After ovulation, the ovum moves into the tube and is capable of being fertilized by sperm for only 1 day (ie. 24 hours).

d) After ovulation, progesterone increases in amount and causes, - the cervical mucus to lose its wet quality and becomes sticky and impenetrable to sperm once again.  
- the cervix becomes firmer, lower and closes more firmly,  
- the basal body temperature rises by about 1/2 degree C, and remains elevated until the beginning of the next cycle.

If pregnancy does not occur the ovary stops producing oestrogen and progesterone and the falling levels of these hormones lead to fragmentation of the endometrium and the bleeding which is called the period. If pregnancy does occur, the womb lining continues to be maintained for implantation of the embryo.

Thus during the menstrual cycle there is the phase straight after the period (before ovulation) which is called the `early infertile phase' followed by the ovulatory phase and in turn followed by the `late infertile phase' when the released ovum is no longer capable of being fertilized.
The three body signs of fertility which the woman can observe when following NFP are,
- the cervical mucus changes to the copious watery fertile type which indicates ovulation,
- body temperature can be used to determine when ovulation has passed,
- cervical changes can also indicate to the woman when the fertile days have begun and ended.

**Counselling**

Counselling is crucial to the success of Natural methods of NFP, more so than with any other method.

The client will need to learn about the signs of fertility and sexual behaviour will need to follow strict rules if the method is to be effective.

a) Advantages of NFP
- can be used to either avoid or achieve pregnancy,
- no drugs or artificial devices are used,
- use of the method leads to increased awareness of reproductive function,
- promotes involvement of the man; co-operation, communication
  and shared responsibility of the couple for family planning are enhanced
- no physical side-effects

b) Disadvantages of NFP
- a long instruction period is necessary with frequent contact with the NFP instructor who must be expert both in teaching NFP and counselling. It is not reasonable to expect good results with this method from the outset,
- commitment and co-operation of both man & woman is essential,
- the woman will need to examine herself vaginally daily and record the signs of fertility,
- ovulatory mucous is difficult to discern in the presence of vaginal infections (such infections are common in Papua New Guinean women),
- Some couples experience emotional stress as a result of having to have intercourse and avoid intercourse on a set timetable. Also anxiety may be produced by uncertainty about the effectiveness of the method,
- In PNG communities, up to 20% of women are lactating, about 5% are peri menopausal, and 30-40% are suffering from vaginal discharge either due to genital tract infections causing cervicitis or vaginitis. Therefore, the majority of women of the fertile age group in PNG may not be suitable candidates for the use of these methods.
Indications and Contraindications
a) Natural family planning (NFP) methods may be appropriate for women who,
   - do not wish to use artificial methods of contraception,
   - have religious or moral beliefs which do not allow her to use other methods,
   - have the ability and willingness to observe, record and interpret the fertility signs,
   - have a fairly regular menstrual cycle and are not post-partum or perimenopausal.
   (Although NFP methods can be used when the menstrual cycles are not regular, women have amenorrhoea or have very irregular cycles will find NFP very difficult to learn and use.)
   - have agreed together with their partners to use this method with a commitment for cooperation,
b) Natural family planning methods may NOT be appropriate for women who,
   - have difficulty in observing, recording or interpreting fertility signs. This may be due to vaginal discharges which interfere with the interpretation of the ovulatory mucous, frequent fevers which can produce fluctuations in temperature, or special situations such as lactational amenorrhoea or the perimenopausal period.
   - have very irregular intervals between their periods,
   - women who find it difficult or unpleasant to examine themselves vaginally each day,
   - find it difficult to abstain from intercourse during fertile days. It is not reasonable to recommend NFP to a woman whose husband will not control himself because of drunkenness or lack of commitment to the method, - for whatever reason.
   - can not communicate with their partners properly about sexual matters,
   - have more than one sexual partner,
   - have some serious social or medical reason which absolutely contraindicates pregnancy,
   - have a persistent vaginal discharge.

Effectiveness
When NFP is used diligently and correctly it can be up to 93% effective; however, most studies show that even in well motivated couples effectiveness is about 75% - 80%. Effectiveness of NFPs very much depends upon the couple's willingness and ability to use the method correctly.

Client instructions
A) The cervical mucous method
   Each day the woman puts her fingers into the vagina and examines and records the type of mucus present. A typical mucus pattern is as follows,
- after the menstrual bleeding ends, there are a few days when no mucus is observed and the vagina feels dry. These are called `dry days'.
- after her dry days, the woman begins to see some mucus; usually it is sticky and white (or yellowish to begin with), eventually it becomes watery and slippery, ie. the typical mucous of ovulation. These are called `wet days'. A woman must consider herself fertile after her period whenever she starts to see any mucus at all: this is because although the mucus down the vagina may be of the sticky type, the mucus in the cervix may have changed to the ovulatory form already.
- after ovulation the mucus begins to become sticky and less in amount once again: once again the vagina sensation is dry. This change of the mucus indicates the post-ovulatory infertile phase of the cycle.

Beginning on the day after menstruation ends, the woman should chart her mucus pattern each evening, noting the type of mucous present and the peak day for the most amount of watery slippery ovulatory type of mucus. The woman should continue charting her mucus pattern like this until she is experienced with the technique and feels confident that she can predict ovulation and the post-ovulatory infertile phase. This usually takes several months.

When you do want to have a child, intercourse should take place on the days when the ovulatory mucus is present.

When you do not want to have a child, sexual intercourse may take place
- during the days of menstrual bleeding,
- on dry days straight after the end of the period. Intercourse can take place on alternative days. (The alternative day rule.) This rule allows semen to leave the vagina so that it does not confuse the examination of the change from dry to wet as ovulation approaches. If the day after abstinence is dry, then intercourse may take place again,
- the first day that any type of mucus is seen, or there is a wet feeling marks the beginning of the fertile period. Abstinence is followed until the fertile phase ends. (This is called the early mucous rule.)
- abstinence should continue until 3 days and 3 nights after the peak day of the ovulatory mucus. Intercourse can be resumed until the next period begins.
- If the bleeding begins before the peak day rule can be applied, ie. before four days have elapsed after the peak mucus flow, abstinence should be followed during the bleeding and for 3 days after the bleeding has ended. If mucous appears during those 3 days, the fertile phase has commenced once again and abstinence should continue. However, if dry days continue the alternate dry day rule can be followed.
If sex does take place on a `fertile day' and pregnancy is not wanted, then condoms should be used for the intercourse. If condoms are not used emergency contraception will be required to avoid an unwanted pregnancy.

Women following NFP should keep a record on a calendar with marks indicating the types of mucus, bleeding and dry days. Refer to the National Guidelines Reference Manual for detailed notes on how to keep a calendar record.

B) Basal body temperature and cervical palpation methods
To use the rise in body temperature which occurs at ovulation time or the changes which occur in the cervix to predict ovulation to plan periodic abstinence, you should refer the National Family Planning Guidelines reference manual.

Follow-up
When a couple begins to use NFP, it is very important that they come to see the instructor every week or so for the first couple of months so that they obtain feedback and check whether they are accurately predicting the time of ovulation. Instructors should discuss with clients if they are satisfied with the method and offer or refer for another method if they are not.

Other Natural Methods of Family Planning
These methods are not recommended but they are mentioned for your information.

i) Rhythm method. This method is based upon regular menstrual cycles and the application of a mathematical formula which predicts ovulation about 14 days before the next period. It also assumes that the egg can be fertilized for up to 24 hours after ovulation and the sperm are viable for only 48 hours in the vagina. This method is not reliable because
- cycle length can change from one month to the next,
- rhythm method usually overestimates the fertile period making necessary abstinence too long for normal marital relationships. When a woman begins to use the method it assumes that she knows the exact features of her cycle already. Most women do not. To use it requires that the woman to study her cycles carefully.

ii) Douche
Many women believe that washing out the vagina with various fluids straight after intercourse will prevent pregnancy. This does not work because sperm can easily swim up into the uterus within seconds of ejaculation.
Coitus Interruptus or Withdrawal method

The man withdraws his penis when he feel that ejaculation is about to take place. This method is not reliable because,
- there is often some leakage of semen from the penis before ejaculation occurs.
- many men find it difficult to withdraw at the right moment.
Chapter 7

BREAST FEEDING AND CONTRACEPTION

* Counselling
* How breast feeding works as a contraceptive
* Effectiveness
* Advantages
* Disadvantages
* Indications and Contraindications
* Client assessment
* Client Counselling and Instructions
* Contraceptives and Breast Feeding
* Medical Benefits of Breast Feeding

The great majority of Papua New Guinean babies are fully breast fed from birth. A woman who is fully breast feeding her baby does not ovulate for many months post-partum. For these reasons breast feeding must be counted as the most widely used method of family planning and accredited with more fertility control than any other method used in Papua New Guinea today. The family planning success of breast feeding is helped by the traditional taboo which forbids sexual intercourse while breast feeding in many Papua New Guinea societies. However, the effectiveness of breast feeding as a contraceptive method diminishes rapidly as an educational diet is introduced to the baby.

Counseling
All mothers should be encouraged to breast feed. Counseling should begin in the antenatal period. Breast feeding should begin at birth. All women should be educated about other methods of contraception antenatally as breast feeding is not completely effective, particularly as sex taboos of strict abstinence are rarely followed nowadays. If a woman elects to rely entirely on breast feeding for post partum contraception, make sure that you carefully explain the limitations of breast feeding to her, and where she may obtain other methods if her periods return or her baby ceases to fully breast feed.

How breast feeding works as a contraceptive
Suckling stimulates prolactin hormone release which suppresses the pulsatile release of ovulatory hormones (gonadotrophins) from the hypothalamus in the brain.

Effectiveness
Full breast feeding can be up to 96% effective in the first 6 months post partum, as long as
- the mother is suckling the baby regularly on demand day and night,
- no food nor other drink (including water) nor a dummy are given to the baby,
- the mother does not get her periods back.

**Advantages**
- It is freely available and easy to use.
- It is a traditional method accepted by everyone in the community.
- There are many health benefits for both the mother and the baby.
- There is no expense to the family.

**Disadvantages**
- It is not effective unless all criteria are fulfilled.
- It is of use for limited duration only as paediatricians recommend introduction of an educational diet from 4 months of age.
- Many sophisticated or working mothers supplement their babies with other drinks from an early age.

**Indications and Contra-indications**

i) Breast feeding may be a suitable method of contraception for women who:
- do not wish to use artificial methods of contraception,
- are willing and able to fully breast feed their babies for the first 6 months post partum.

ii) Breast feeding is not a suitable method of contraception for women who:
- are not fully breast feeding their babies on demand day and night,
- are more than 4 months post partum,
- whose menses have returned less than 4 months post partum.
- rarely a women are advised by the doctor not to breast feed because of serious medical problems.
  (Women with TB can breast feed: the baby is put on Isoniazid TB prophylaxis for the first 6 months. Women with HIV infection may breast feed except perhaps in the terminal phase of the AIDS disease.)
**Client Assessment**
Assessment is based upon the history alone. No physical examination or laboratory tests are necessary.

The only important requirement is that the client will be sure that she is going to fully breast feed her baby for at least the first 6 months of life.

**Client Counselling and Instructions**
1. Fully breast feed your baby: do NOT use supplementary fluid (not even water) or a dummy for the first four months post partum.
2. When you begin supplementary feeding and drinks or if menses return at any time, commence another method of family planning as breast feeding is no longer completely reliable as a contraceptive.

**Contraceptives and Breast Feeding**
The following contraceptive methods are especially good for women who are breast feeding and need another method to ensure maximally effective family planning:
- Depo provera,
- IUD,
- Breast feeding pill for the first 7 - 9 months post partum,
- Condoms,
- Sterilization.

The combined pill decreases the amount of breast milk a little. For this reason most women should not use it in the early months of breast feeding when the baby is relying on the breast for all its food. After 9 months, the baby should be eating an educational diet as breast feeding only supplies supplementary nutrition. It is quite safe to use the combined pill and breast feed once baby is eating alright. Most babies are eating well by 7 - 9 months of age.

**Medical Benefits of Breast Feeding**
1. Breast milk is the best food for small babies. It contains everything that the baby needs, and in the right quantities. It is not possible to over feed a baby with breast feeding.

2. Breast fed babies have less problems with things such as allergies, obesity, eczema, colic, and infections.

3. Breast feeding helps decrease dental problems and improves speech development.
4. Breast feeding promotes bonding and good relationships between mother and baby.

5. Breast feeding helps to protect the mother against cancer of the breast and ovary.

6. Breast feeding is economical and helps mothers space their babies.
Chapter Eight

BARRIER METHODS OF CONTRACEPTION

* Counselling
* Effectiveness
* Advantages and Disadvantages
* Common misconceptions about condoms
* Most appropriate users and those who don't find it appropriate
* Follow up visits and the STD Imperative
* The Diaphragm
* Spermicides
  - advantage
  - disadvantages

The Condom

[There is NO need to register men as family planning clients who come to a clinic merely to get a supply of condoms. Allow clients to take packets of condoms freely. Clinics should place the packets of condoms on the front desk or near the front door where they can be distributed most easily.]

The condom is a rubber sheath worn on the penis during intercourse. It blocks the man's semen from being ejaculated inside the vagina. Condoms are also very useful in preventing transmission of STDs.

Counseling
The main points to stress when a couple elects to use condoms for family planning are;
- a condom must be used every time intercourse takes place if the method is to be effective.
- the condom must be rolled onto the erect penis before any entry to the vagina is made. It must not be unrolled before putting it on.
- only water based lubricants should be used (although rarely are any lubricants required as the
  condoms have their own lubrication). Do not use Baby Oil or other oils as lubricants as this
  will cause condoms to break during use.
- the condom should be held on during withdrawal of the penis from the vagina after ejaculation takes
  place as it can slip off the flaccid penis and then spillage of semen can occur,
- come and get sufficient supplies of condoms at regular intervals. Most couples will require 20 per
  month ie.(about 120 for a 6 month supply) depending upon the frequency of intercourse.

Effectiveness
Condoms are very effective when used properly every time sex takes place. The loss of effectiveness is
usually due to lack of consistent use. Use of spermicide with the condom increases its
effectiveness.

Advantages
- Encourages male participation in family planning, is cheap and generally available without
  prescription.
- Protects against STDs including PID, cancer of the cervix and AIDs.
- The rubber sheath decreases penile sensitivity and helps prevent premature ejaculation,
- the rim at the base of the condom stops blood flowing out of the penis and helps older men maintain
  their erections better.

Disadvantages
- Some men don't appreciate any reduction in penile sensitivity.
- Putting on the condom may interrupt love making, which can lead to loss of erection in some men.
- New condom must be used each time which means that forward planning to maintain stocks is
  important.
- some women just don't like the idea of the condom going inside them.
  (condoms are associated in many womens' minds with prostitutes)

Common misconceptions about Condoms
1. Some women worry that the condoms might come off and get stuck in the vagina. This is not
   possible as it can easily be removed with the fingers if it does come off. A woman can not feel
   the difference when a man is using a condom and when he is not.
2. Condom might burst during intercourse. This is very unlikely as long as oils are not used for
   lubrication and the condoms are not past their expiry date.
**Those who find Condoms most advantageous**
- Single people who need occasional or emergency contraception,
- Couples who only have sex once in a while and are worried about the side-effects of other methods,
- Individuals with more than one sex partner or whose partner is unreliable and may transmit some STD to them.

**Those for whom Condoms are not usually appropriate**
- When pregnancy is medically or socially contraindicated a more reliable method such as Depo provera or Sterilization should be used.
- When the man is an unreliable user or has an allergy to latex rubber.

**The STD prevention Imperative**
Because STDs are so prevalent in PNG society and the fact that AIDS is now spreading through our community, all parents should teach their children about condoms as an effective method of preventing STDs.

Of course it is better for unmarried people to abstain from intercourse until after marriage; however, sometimes young people find themselves in situations where sex is inevitable. For such emergencies the condom is the only way to avoid catching some dangerous STD. It can be said that there is much more virtue in having a condom in the pocket or bilum which never needs to be used, than not having one available when unexpected or unplanned sexual intercourse takes place.

**Follow up visits**
Make sure the client has a pamphlet about the use of the condom to take home so that he can read about what you have said in the privacy of his home.

Tell him where he can obtain more condoms when his supply is running low: always give a client sufficient condoms for at least 2 - 3 months - or more if he comes from a remote area ie. 50 - 200 condoms. It is embarrassing for clients to have to come back at frequent intervals to the clinic to ask for more condoms. Give sufficient to each client and order more for the clinic!

**The Diaphragm**
The diaphragm is a rubber sheath which a woman can insert into her vagina to cover the cervix and thereby prevent sperms from entering the uterus. The diaphragm needs to be properly fitted, and the client needs to be become skilled at inserting it in the correct position for it to be
effective. Unfortunately many PNG women are not keen on using the diaphragm because of the need to insert something into the vagina each time before they have intercourse. You should refer to the National Family Planning Guidelines if you wish to supply diaphragms to your clients. In PNG only private clinics are fitting women with diaphragms at the moment.

**Spermicides**
Various contraceptive chemicals have been used in the vagina in an attempt to prevent pregnancy in many traditional societies. Modern tablets, creams, sponges and foams containing potent chemicals to inactivate or kill sperms are now available. These spermicides are more effective when used in conjunction with condoms and diaphragms. When used alone spermicides are not very effective.

**Advantages**
- there are not side effects other than occasional allergies,
- they can be bought at any chemist without prescription.

**Disadvantages**
- they are expensive and only available in urban pharmacies,
- used alone they are not very effective & if tablets are being used the couple must wait for at least 10 minutes after insertion before intercourse takes place.

Chapter Nine

**ORAL CONTRACEPTIVES**

* How they work
* Advantages
* Disadvantages
* Common Misconceptions about OCPs
* indications and Contraindications for use of OCP
* Drug Interactions
* Client Instructions
* Management of OCP problems
  - Amenorrhoea or light periods
  - Spotting or bleeding between periods
  - Nausea or vomiting
  - High blood pressure
  - Headaches, chest and leg pain
* Other Medical Benefits of the Combined OCP
* Progesterone only or 'Breast Feeding Pill'
  - Effectiveness
  - Differences with the combined OCP
  - Indications and Contraindications
  - Client Assessment and Method Provision

The Combined Oral Contraceptive Pill

Background
The combined pill (OCP) contain substances which mimic both female hormones ie. oestrogen and progesterone. Many preparations of the OCPs are available but the OCPs used most commonly by our Family Planning Services are Microgynon 30 and 50 ED and Lofeminol. It is important to read the leaflets inserted in the package carefully to ensure you are giving the appropriate OCP to your client. Some packets of pills contain 21 pills and other 28; those with 28 tablets contain seven non-hormone pills to make up the four weeks of the cycle.

How OCP work
- suppresses ovulation,
- thins the lining of the uterus making implantation unlikely even if an ovum does form in a particular cycle
- makes the cervical mucus impenetrable to sperm.

Effectiveness
Most studies show that there is less than a 2% failure rate for women taking the pill in the first year of use. However, most of these failures are due to women forgetting to take the pills, or if the pills are vomited or not absorbed due to a gastrointestinal upset.

Advantages
- Very effective if taken properly,
- Easy to use with few side effects,
- Causes the woman to have lighter, shorter and very regular periods.
- Lessens `period problems' such as dysmenorrhoea and pre-menstrual syndrome.
- Decreases incidence of ovarian and uterine cancers and ovarian cysts. The COP also protects against PID and reduces cystic breast disease, endometriosis and acne.

Disadvantages
- Must be taken daily to be effective,
- There may be some minor side-effects during the first couple of cycles of use such as nausea, mood change and weight gain.
- A few women get serious side-effects such as rise in BP and thromboembolism.

Common misconceptions about the OCP
1. "Can the pill cause cancer?" In fact the pill protects women against ovarian and uterine cancer: The pill does not cause any other cancers.
2. "Can the pill cause deformed babies?" Large studies have shown that there is no increased incidence of congenital abnormalities either if a woman conceives whilst taking the pill or shortly after stopping it.
3. "Can the pill cause sterility?" Ovulation usually resumes about 2 - 3 months after stopping the pill although occasionally some women can take up to a nine months to resume ovulation. A woman knows that ovulation has returned when her periods come back to their usual pattern after she stops taking the pill.

As the pill helps to prevent PID, it may actually help to prevent sterility!

The OCP is an appropriate method for women who:
- want to take tablets for contraception and want a very effective method,
- have problems with heavy or irregular or painful periods.

The OCP is NOT appropriate for women who (contra-indications):
- have a history of thromboembolism, stroke, high BP, heart attacks, serious liver disease or cholestatic jaundice of pregnancy.
- cannot remember to take a pill every day.
- are breast feeding babies less than 7 - 9 months old,
- are over the age of 40 with risk factors for heart disease such as smoking, family history of heart attacks or diabetes, - unless there are no alternative methods of family planning available to her.

Drug interactions
The following drugs may decrease the effectiveness of the oestrogen part of the OCP thereby making the pill less effective;
- rifampicin, barbiturates, griseofulvin, phenytoin and tricyclic antidepressants. Rifampicin is such a potent enzyme inducer that a five-fold increase in the metabolism of the COC has been seen in some women. For long term users of Rifampicin an alternative contraceptive is recommended.
The Depot may be used since it is the estrogen component of the COP which is largely affected. However, even in the case of the Depot it is prudent to give the injection at 8 weekly intervals instead of the 12 weekly intervals. For the other enzyme inducers the same advice should come in useful and another contraceptive considered. If the client still prefers the COP consider the possibility of the 50µg dose of COP.

Other drugs which can be affected by the OCP include theophylline & corticosteroids (their effect is usually increased), benzodiazepine tranquillizers eg. Valium (variable effect may either increase or decrease their potency), oral hypoglycaemics and insulin may become less effective in controlling hyperglycaemia in diabetics.

The OCP should not be used if a woman is on oral anticoagulants eg. Warfarin.

Client Instructions

1. Take your pill every day preferably at about the same time, - evening is the best time ie. after dinner: this minimises nausea.

2. The best time for a new user to begin the pill is on the 3-5th day after the beginning of her period. However, she can begin any time in the cycle, in which case her next period will be delayed until she completes the first packet. (100% contraception can not be guaranteed during the first cycle if a woman begins the pill in mid-cycle: therefore use condoms for backup. If the husband is not willing to use condoms, the woman can take the pill twice daily for the first packet and this will provide better contraception for the first packet.) Do not say "wait until your next period before starting your pills" unless you are able to provide her with alternative effective contraception until her period comes.

If a woman is taking a `21 day' type of pill then she needs to have a break of exactly one week between packets each month. The `28 day' type of pills, which are mainly used in PNG family planning clinics, must be taken every day. Remember that the first 21 tablets are the hormonal tablets; the last seven tablets (the red ones) are iron tablets. Start a new `28 day packet' straight after finishing the previous one.

MISSED PILLS:

EXPLANATORY NOTES:

The effectiveness of the pill depends on its ability to suppress ovulation. When women stop taking the pills they risk a return of the ovaries to normal activity of ovulation. The seven days of pill-
free interval during which dummy (iron, sugar tablets) are taken are usually insufficient to allow the ovaries to resume their normal function. If this pill-free interval is prolonged for any reason e.g. forgetfulness, sickness, vomiting, the pill-free interval may inadvertently become unduly prolonged and thus allow the ovaries to resume normal function. This inadvertent prolongation of the pill-free interval may occur when the last few pills are forgotten or are not taken for any reason. If the woman goes on to take the dummy pills after missing some of the pills in the last 7 days there is a risk of pregnancy because of the prolonged time the woman has not taken the pills. On the other hand if after taking the seven dummy pills the woman does not start the new packet on time, for any reason, the pill free interval will also be prolonged. Furthermore, any missed pills in the first seven days after the woman has finished taking the dummy pills will result in prolongation of the pill-free interval and risk a pregnancy.

1. If a woman forgets to take one hormonal pill, she should take it immediately as soon she remembers it; even if this means taking two pills in one day.

2. If she misses two or more hormonal pills, the advise will depend upon the point in the pill taking when the pills were missed
   - If she misses them during the first seven days of the pill taking she needs emergency contraception. During this period any missed pills would inadvertently prolong the pill-free interval. The client needs to start a new packet altogether after the completion of the emergency contraception.
   - If the missed pills occur after she has already taken seven or more hormone pills she has to simply continue to take the rest of the COPs daily as instructed including the iron (reminder, dummy) pills. There will not be any need to take any special precautions as long as the number of missed pills do not exceed four. If the missed pills exceed 4 she needs to start a new packet altogether.
   - If the missed pills occur during the last 7 of the hormonal pills, she should stop taking the rest of the pills including the iron (dummy, reminder) pills. She should start another packet altogether.

**Back-up method.** Every woman commencing pills for family planning should be told about using `back-up' methods when necessary. Some experts recommend `back-up' method during the first month of use because many women forget to take the pill often when they are new to it. `Back-up' method should also be used if she, gets sick and vomits them or has severe diarrhoea. A good `back-up' method of contraception is condoms.
**Warning signs of side-effects.** A woman should be warned to report to the clinic or another health worker if she experiences very severe headaches, problems with vision, chest pain and shortness of breath or severe leg pain.

**Reassurance about minor side effects.** Tell all clients beginning the pill that they should expect a little nausea when they commence the pills but that this should go away in a couple of weeks when their body gets used to the pills. Some women have occasional spotting between period when on the pill; this is not dangerous. You can also reassure a woman who gets pregnant and is still taking pills that it will NOT hurt the fetus. Some women have very light periods on the pill. Once again, this is not a problem.

**Follow-up.** Ask all new pill clients to come for review after the first packet if traveling is not a problem. This visit is mainly to reassure the woman once again about the minor side-effect of nausea and encourage her to keep on taking her pills properly. Thereafter, it is a good idea to check women every six months when they are on pills. At the follow-up visit, take the BP, enquire about any side effects or problems and make sure she is taking her pills properly. *Make sure that you supply women with sufficient pills to last until their next visit*

**Management of combined OCP problems**

1. **Amenorrhea or very light periods.** Review correct use of the pill. Make sure she is taking the red iron tablets if she is on a 28 day pill, or having a week's break between packets if she is on a 21 day pill. Examine her for pregnancy. If she is not pregnant, reassure her that there is no problem as there is less `rubbish' to come out when she is taking the pill, because she is not `ripening her eggs'.

2. **Spotting or bleeding between periods.** This is called `break through bleeding'; it is not dangerous but it can be inconvenient. A common cause of spotting on the pill is because the woman is forgetting to take some of the pills. Check on this first. Do a speculum examination to make sure she does not have a cervical lesion. If not, reassure her. Encourage her to take her pill regularly every day if she has been missing out on some. Change to a higher dose pill if she has been taking the pill regularly to control the `break through bleeding' problem, eg. Microgynon 50 ED.
3.  **Nausea or vomiting.** Make sure she is not pregnant. Reassure her and advise taking the pill just before going to bed to minimise the problem: nausea usually goes away after a month or two when the body gets used to the pill.

4.  **High Blood Pressure.** Repeat the BP when she has been lying down for 15 minutes. If it is still high advise changing from the combined OCP to another method, eg. Depo provera or the breast feeding pill (Microlut), and refer her to a doctor for a check-up.

5.  **Headaches.** Check the BP, if this is normal give her some aspirin or paracetamol to take if the headaches are not too severe or frequent: refer her to a doctor if they are very severe or too frequent. The headaches will probably become less or stop if she changes over to Depo provera.

6.  **Severe headache, chest pain or leg pain.** These severe symptoms may indicate pulmonary embolus in the chest, deep venous thrombosis in the leg or stroke: the client should be referred to a doctor. These serious problems are extremely rare side effects of the pill especially in young Melanesian women.

**Other benefits of the Combined OCP**

a) it protects a woman against PID by making cervical mucous less penetrable to sperms and germs,
b) it protects a woman against endometrial and ovarian cancer,
c) it regulates the periods well and prevents menstrual cramps and PMS.
d) because it makes the amount of menstrual bleeding less, it prevents anaemia.
e) it prevents ectopic pregnancies because it stops ova from ripening.
f) it often improves acne and rheumatoid arthritis, lessens endometriosis, cystic disease of the breast and can increase the size of the breasts a little.

For further information about the OCP see Chapter 9 of the National Family Planning Guidelines.
**Progestin-only Pills or "The Breast Feeding Pill"**

**Background**
The breast feeding pill contains only progestin and no oestrogen. It works mainly by making the cervical mucous so thick that only a few sperms are able to get through, although sometimes it inhibits ovulation as well. 'Microlut' is the name of the progestin only pill available in the FP clinics of PNG.

**Effectiveness**
The breast feeding pill is about 97% effective if taken at the same time every day for the first 9 months post-partum and the woman is breast feeding.

**Differences with the combined OCP**
1. Must be taken every day at the same time.
2. Does not cause any lessening in the amount of breast milk produced.
3. Less likely than the combined OCP to cause cardiovascular side effects.
4. Does not cause minor side effects like headache and nausea.
5. Doesn't regulate the periods: break-through bleeding and irregular periods can be inconvenient, although they are not dangerous.
6. Missing one pill is more likely to lead to pregnancy.

**The Breast Feeding Pill is very appropriate for:**
- the woman who is the first 9 months of post partum breast feeding and does not want to have the injection,
- women who can not take the combined OCP because of problems with oestrogens eg. previous venous thrombosis or blood pressure problem and do not want to have the injection.

**Client Assessment & Method Provision**
1. Commence the pill at any time post-partum or in the cycle. Do NOT wait for the periods to return before commencing the breast feeding pill.

2. Take the pill at the same time every day: never miss out taking a pill.

3. When you reach 7 - 9 months post partum (or earlier should you stop breast feeding), change over to the combined OCP or another method.
4. Use condoms for back-up as well for the first month of use. This is especially necessary if the periods have returned in the post partum period.

5. If you are late by up to 3 hours in taking your pill there is probably no problem, but if you are late by more than 3 hours take your pill immediately and use `back-up' method as well for the next seven days. If you miss your pill for more than 1 day, take pills twice daily to catch up and cover yourself with condoms until the end of the packet. Consider using emergency contraception if you have sexual intercourse during the times you have missed the pills and follow this up with the back-up method for the next 7 days.

6. Make appointment to come back to get further supplies and to change over to the combined OCP or another method at 9 months post partum as appropriate.

7. Reassure the woman about irregular spotting and amenorrhoea on this pill.
Chapter ten

INJECTABLE CONTRACEPTIVES, DEPO PROVERA

* How it works
* Effectiveness
* Advantages and Disadvantages
* Common misconceptions about Depo Provera
* Indications and Contraindications
* Client Instructions
* Management of Depo Provera Problems
  - Amenorrhoea
  - Continuous spotting
  - Excessive weight gain

Background
The common injectable used in PNG is Depo provera which lasts for 3 months. There is another injectable available called Noreristerat. (Other names are NET-EN and norethisterone enanthate) The effect only lasts 2 months. Depo provera has been in use for over 30 years and is now used in more than 50 countries around the world including Australia, New Zealand, USA and Britain. It is the most popular temporary method of family planning in PNG.

Depo provera is a long acting progestin similar to the one contained in the breast feeding pill.

How it works
The main effect of these injectable contraceptives it to stop ovulation. In addition to this they also cervical mucus impenetrable to sperms.

Effectiveness
Depo provera is the most effective of the temporary methods. It is calculated to be 99.9% effective. Most Depo Provera failures are due to nurses not shaking the ampoule properly before giving the injection.

Advantages
- extremely effective and simple to administer.
- can be used by older women, breast feeding women and those with a contra-indication to oestrogen eg. BP problems, past history of thrombembolism etc.
- helps protect women against ovarian and endometrial cancer, PID, ectopic pregnancies and anaemia,
- there may be an increase in appetite (many women report 'feeling good' on Depoprovera).

**Disadvantages**
- some women experience irregular periods, spotting or ammenorrhoea.
- should a woman not exercise, and then satisfy an increased appetite she may gain weight (this is usually only a problem with urban women).

**Common Misconceptions about Depo provera**
1. "Can the injection make you sterile?" A lot of research around the world has shown that depo provera does NOT make women sterile. Although there may be some delay in return of ovulation and menstruation after stopping Depo provera, studies have shown that the pregnancy rate after stopping Depo is the same as after stopping other (including barrier) methods.

2. "Can Depo provera cause cancer?" Depo provera actually prevents ovarian and uterine cancer: it has no effect in either preventing or causing other sorts of cancer in human beings. (Some beagle dogs get breast nodules when given massive doses of Depo provera, but many beagles get breast nodules without Depo provera.)

3. "Can Depo provera cause deformed babies?" If a woman takes an injection of Depo provera when she is in early pregnancy there is no evidence that this will cause the baby to be deformed. Many women have done this by mistake over the years and the incidence of congenital abnormalities is the same as those not using any form of contraception.

4. "Can Depo provera make women fat?" Depo does make some women feel better so that their appetites are improved; however, if a woman is exercising normally and making sure that she is not eating more than usual, then she will not get fat. In fact village women almost never put on weight with Depo it is only some urban women who do not exercise who do so.

**Depo provera is appropriate for women who:**
- want an injection for family planning or may forget to take the pill,
- are breast feeding.
- want long term contraception and don't mind if the periods get less or stop.
- have some contra-indication to using the combined pill or are getting too old to use it.

(NB. Many women using Depo provera do _not want any more children_. These women would be better off having a tubal ligation rather than repeated injections for many years. Some of these women assume they are sterile when they get to 40 years so they stop their Depo injections. The result is that they have may have a high risk and an unwanted pregnancy).

Always take the opportunity to counsel older women having Depo for long periods about this, and refer them for TL if they agree. Moreover, Depo stocks sometimes run out!

**Depo provera may NOT be appropriate for women who (contra-indications):**
- want only very short term contraception, say less than 3 months.
- have acute liver disease eg. hepatitis,
- do not have any children yet. (Although there is NO evidence that Depo provera causes sterility, if you give a nullipara Depo provera and later on she does not get pregnant (even if this is due to PID), then she is sure to blame the Depo and give this valuable family planning method a bad name.

**Client instructions and method provision**

1. Counsel the woman about the common side effects that she is likely to experience, ie. that her periods are likely to get less in amount and less often: some women stop having periods completely. Reassure her that this is not dangerous and merely due to the fact that she is not ‘ripening her eggs whilst on Depo’ and therefore there is less `rubbish' to come out. Some women have irregular spotting on Depo provera. This is not dangerous but can be inconvenient: tell her to come back to the clinic if she has frequent spotting.

2. Give her a card with the date of the injection and the date to come back for the next injection.

3. **Shake** the ampoule well before preparing the injection. Give the injection using proper sterile technique deep into the buttock muscle: do NOT rub the injection site afterwards.

4. Tell all clients that they need to stop their Depo shots at least 4 months before wanting to conceive the next pregnancy. If any clients make up their minds that they do not want any more children at all whilst they are on Depo, counsel them about tubal ligation and send them to a doctor with a signed TL consent form if both husband and wife agree. Make sure that older
women using Depo know that Depo does not make them sterile, and they must not stop their Depo when they get to 40+: otherwise it is likely that will have a dangerous unwanted high risk pregnancy.

At the follow up visits, weigh the client, take the BP and counsel them once again about 1 and 4 above and give the next injection and a new appointment time.

**Management of Depo provera problems**

1. **Amenorrhoea.** Make sure the woman is taking her Depo at 3 monthly intervals. If she has missed an injection, examine her to make sure she is not pregnant. If she is not pregnant, reassure her and give her the next Depo shot immediately if she is overdue for it, or on time if she is not.

2. **Continuous spotting or bleeding.** Do a speculum examination to make sure there are no cervical lesions. If not, this can be easily controlled by giving 14 days of an oestrogen tablet, - either ethinylestradiol 0.05mg daily, or Microgynon 30 ED or Lofeminol one hormone tablet bd for two weeks.

3. **Excessive weight gain.** Check urine for sugar, if normal, counsel client about diet and exercise. If she can not control her diet or discipline herself to do daily exercise, weight control may be a problem and she may request to change onto the pill or another method.

4. **Depo provera does not cause** abdominal pain, headaches nor other symptoms. If a woman comes complaining of non-Depo type side effects examine her appropriately or send her to a doctor for evaluation: meanwhile reassure her about her Depo for family planning and give her the next injection on time.

For more information about Injectable Contraceptives refer to Chapter 10 of the National Family Planning Guidelines for Papua New Guinea.
Chapter eleven

INTRAUTERINE DEVICES (IUD)

* How it works
* Effectiveness
* Advantages and Disadvantages
* Common misconceptions about the IUD
* Indications and Contraindications
* Client Assessment and Method Provision
  - the risk of STD infection
  - Laboratory tests
  - Counselling the client
  - Insertion timing
  - Insertion technique
  - Follow up
* IUD Removal
* Management of IUD Problems
  - amenorrhoea and suspected pregnancy
  - heavy periods and uterine cramps
  - lower abdominal pain
  - missing strings or expelled IUD
  - suspected perforation of the uterus
  - fainting attach during insertion

[Only to be inserted by those specifically trained to do so.]

Background

Lippes loops have been used in PNG since the 1960s. The modern IUDs contain copper. The latest TCu380A can stay in the uterus to produce reliable contraception for at least 10 years. This section of the pocket book does not contain much information about insertion techniques and other technical details. Consult the National Family Planning Guidelines for PNG for any information which you can not find here.
**How it works**

The IUD sitting in the uterus reduces the numbers of sperms reaching the ovum, inactivates sperms so that they can not fertilize ova and prevents any fertilised ova from implanting in the uterus.

**Effectiveness**

The effectiveness of a properly placed TCu380A IUD is 99.5%.

**Advantages**

- very effective and does not require woman to take any medicine,
- can stay in the uterus providing good contraception for up to 8 years,
- requires only one follow up visit after insertion and for removal,
- is suitable for breast feeding women.

**Disadvantages**

- insertion can be uncomfortable.
- some women have heavier and painful periods with an IUD,
- if the woman is given an STD by her partner, the IUD may encourage spread into the pelvis more quickly, causing PID.
- occasionally the IUD is expelled, and if this is not noticed the woman may become pregnant.

**Common misconceptions about the IUD**

1. "Can the IUD travel through a woman's body and damage important organs such as the heart or brain ?" The IUD stays in the uterus until it is removed. Occasionally it can drop out of the vagina, and very rarely it can become embedded or penetrate the uterine muscle in which case it will be stuck in the pelvis. If this happens a doctor can remove it using special techniques.

2. "Can the IUD cause damage to a man's penis during sex ?" The IUD is inside the uterus out of reach of a man's penis: only the fine little strings attached to the end of the IUD are protruding through the cervix into the top of the vagina.

**The IUD may be an appropriate method of family planning for women who:**

- lives in a remote area and can not come for repeat check ups or supplies,
- does not like having medicines such as pills or injections for family planning,
- is a low risk person for getting an STD
- is breast feeding or has borne a child already,
- has contraindications for hormonal methods of contraception,

**The IUD is not an appropriate method of family planning for women who:**
- have had PID, ectopic pregnancy or are at risk of getting an STD *,
- have never had a child ie. is a nullipara,
- have undiagnosed abnormal PV bleeding or heavy painful periods or are very anaemic (Hb less than 8g%),
- have gross uterine abnormality such as big fibroids or an abnormal uterus,
- have impaired response to infection, eg. AIDs, diabetes, on steroids, chronic renal disease, blood dyscrasias or rheumatic heart disease.

**Client assessment and method provision**
1. Make an assessment of the client with regards her suitability for IUD use by taking her relevant medical/social*/gynaecological history and doing a pelvic and general examination (see previous sections above and Chapter 4.)

* Risk of STD infection. The following women are at risk of STD infection in PNG society and should be carefully counseled before they use an IUD for family planning.

Single or divorced women, widows or those separated from their husbands.
Women whose husbands drink a lot and stay out overnight.
Women who live in villages or towns along the highlands highway.
Urban women who are not 100% sure of the faithfulness of their husbands, especially when they go away from home on trips alone.
Wives of polygamous husbands.

2. Whenever a woman requests an IUD for family planning in an urban area, always pose the question to her about her need to be 100% sure about her husband for the IUD to be safe for her. Many reliable husbands do strange uncharacteristic things when they get drunk or travel away from home eg. to Manila, Sydney or Mt. Hagen. There is a high prevalence of STDs in some urban groups eg. soldiers policemen, travelling businessmen and politicians.
3. **Laboratory tests** are indicated if some problems are suspected: Pap smear for cancer of the cervix, cervical swab for gonorrhoea if cervicitis is seen, urine for protein or sugar if diabetes or chronic renal disease suspected, test for pregnancy if period is missed, Hb test if she looks very pale.

4. **Counsel the client** about,
   - the fact she will probably experience slightly heavier periods for at least the first two to three months after insertion,
   - what to expect when you are inserting the IUD: describe the procedure to her,
   - the danger signs indicating need for IUD removal, i.e. fever with severe lower abdominal pain or abnormal pv discharge, or very heavy bleeding,
   - the need to come for a check up if she misses her period.

5. **Insertion timing.** The best time to insert an IUD is during menstruation, or about six weeks post partum. If an IUD is inserted at other times one needs to be sure the woman is not pregnant. (Ask about the date of the LMP and do a bimanual examination to determine the size and consistency of the uterus.

**Insertion technique**
- speculum examination to check cervix,
- bimanual examination for direction of uterus and presence of abnormalities,
- load the CuT380A inside its sterile package, (see Fig. and page 11-13 & 14 of National Family Planning Guidelines for a complete description of this technique.)

Fig 3.
- reinsert the speculum and swab the cervix with antiseptic,
- grasp the anterior lip of cervix with a volsellum and sound the uterus,
- adjust the moveable flange (depth gauge) on the CuT380A to the same depth as was noted when sounding the uterus, insert the solid white rod and insert into the insertion tube. Insert the IUD to the fundus and, using the withdrawal method, release the IUD from its introducer.

Fig 4 & 5.

- withdraw the inserting rod and its insertion tube.
- trim the threads to about 3cms, and remove the volsellum and speculum.

6. **Arrange for follow up.** If it is possible for the client to come back for follow up it is usually reassuring for her to be checked after the next period so that she can be sure that she is feeling the threads alright. However, this may not be possible if the woman comes from a very remote area, and as long as she is confident in checking the strings after each period there is no need for repeated check ups unless she has a problem.

**IUD removal**
The IUD will should be removed if it is causing problems (see above), if the woman wishes to become pregnant, or if a TCu380A has been in place for 8 years, in which case it needs to be changed in order to provide continuing effective family planning. (If a woman keeps her IUD for 10 years and still does not wish to get pregnant you should enquire as to whether she ever wants any more children. If she does not, you should counsel her about sterilization and send her to hospital for this if she and her husband agree.)
Insert a speculum, wash the cervix with antiseptic solution, grasp the threads with a strong forcep and apply steady traction in a downward direction until the IUD is removed.

**Management of IUD problems**

1. **Amenorrhoea may be due to Pregnancy.** If it is possible to arrange for a scan, do this. If there is associated abnormal bleeding now with pain, there may be an ectopic pregnancy. Refer her to a doctor. If there is an intrauterine pregnancy of less than 13 weeks gestation, the doctor will probably decide to remove the IUD to lessen the possibility of septic abortion; however, it is dangerous to attempt to remove an IUD if there is an intrauterine pregnancy of more than 13 weeks or if the threads are not visible. See O&G Standard Management Book.

2. **Cramping lower abdominal pain associated with heavy periods.** Examine per speculum to make sure there is not partial expulsion of the IUD. If the IUD is in situ and it was inserted less than 3 months ago, reassure her that the periods will probably return to a more normal pattern soon. If this problem is going on for more than 3 months suggest an alternative method of family planning. Check the client for anaemia and treat if necessary.

3. **Severe lower abdominal pain.** Examine her for severe lower abdominal tenderness, rebound tenderness and cervical excitation pain: if she has any of these signs there may be an ectopic pregnancy or PID. If PID is diagnosed it should be treated promptly and the IUD should be removed and an alternative method of family planning suggested. Suspected ectopic pregnancies need to be referred to a doctor immediately. See O&G Standard Management Book.

4. **Missing Strings.** Ask the client if the IUD has been expelled (see below). Check the client for pregnancy. If there is pregnancy palpable abdominally, there is no need to do anything except send her for antenatal care. If there is no pregnancy palpable abdominally, send the client to a doctor to have a scan or other test to determine where the IUD is. If it is still in the uterus there is no problem but she may need anaesthesia to have it removed when the time comes.

5. **Expelled IUD or the stem of the IUD is felt protruding from the cervix.** A new IUD can be inserted with the next period or the client may like to consider an alternative method of family planning. A partially extruded IUD needs to be removed immediately because it causes severe pain.
6. **Suspected perforation of the uterus.** This can happen either at the time of sounding of the uterus or during IUD insertion. If this happens during IUD insertion, remove the IUD. Observe the client for signs of shock; take the BP and pulse every 10 minutes for an hour. If signs of shock develop or intra-abdominal bleeding is suspected refer the client to hospital. If the client exhibits no signs of shock nor intra-abdominal bleeding, she has probably just fainted. Give her an alternative method of family planning to use: if she still wants to use an IUD after two months, then she should see a very experienced family planning worker or a doctor for insertion.

7. **Fainting attack.** If a woman feels faint or faints either during an IUD insertion or removal, stop the procedure. Evaluate for shock and perforation (above): if there are no signs of shock or perforation, allow the woman to lie down for some minutes. Do not over treat, i.e. fainting does not need treatment with iv fluids! When she feels better resume the procedure.

Refer to Chapter eleven of the National Family Planning Guidelines for Papua New Guinea for more information about IUDs.
EMMERGENCY CONTRACEPTION
The "Morning-After Pill" or Emergency Oral Contraception

Background
Combined OCP taken in `double dosage' can prevent pregnancy if taken soon after intercourse. A lot of research has been done on this issue over recent years which shows that the method is effective and safe, although not very suitable for repeated or regular use.

Counselling
Discuss the following with the client:

1. How it works
   - If the client has had unprotected intercourse in the past 72 hours (ie. 3 days) pregnancy can be prevented by taking the "morning after pill" (MAP).
   - this `double dose' of the OCP may sometimes prevent ovulation or prevent implantation depending on the timing of the medication in relation to the expected ovulation time.

2. How to take it
   - take 3 Microgynon or Lofeminol hormone pills (ie. not the red iron tabs) stat. and another 3 after 12 hours.
   - the woman should be told to expect some nausea after this high dose of the OCP.

3. Alternatively, she may take 750 micrograms of a special preparation of Levonorgestrel (Postinor\textsuperscript{R}2) tablets which are available at some hospitals. Another tablet should be taken 12 hours later. When Postinor2 tablets are not available she may take 25 tablets of Microlut (breast feeding pills) as a stat dose followed 12 hours later by another 25 tablets.

4. Effectiveness - The MAP or emergency contraception tablets are 98\% effective if taken within 24 hours of intercourse and about 85\% effective in preventing pregnancy if taken between 1 - 3 days after intercourse. There is no use taking the MAP more than 3 days after intercourse ie. do NOT give the MAP to women who come in complaining that they have missed their periods and do not want the pregnancy. By the time a woman has missed her period, she is already at least 14 days pregnant.
USE OF THE IUD FOR EMERGENCY CONTRACEPTION

Another method of emergency contraception is insertion of the CopperT IUD (Intrauterine Contraceptive Device). This device may be inserted if you are able to estimate with the client’s input, when her expected time of ovulation is. After you have estimated the time of ovulation, the IUD should be inserted within 5 days of the estimated time of ovulation. It may well happen that the time of the unprotected intercourse may coincide with the time of ovulation. In that case all you do is to just insert the IUD within 5 days of the unprotected sexual intercourse. There are 2 mechanisms of action of the IUD for emergency contraception. It may prevent fertilization if the IUD is in place before ovulation or it may be able to prevent implantation.

5. Discuss and supply a regular method of family planning if your counselling reveals that the woman needs some regular contraceptive protection. If a client has to use emergency contraception more than once per month then she should be using a method to cover her for everyday contraception.

The MAP may be appropriate for a woman who:
- has been raped,
- whose husband returns unexpectedly from a trip,
- when a condom breaks,
- needs emergency contraception because unplanned intercourse may occur at any time
- those using natural methods who have sex at "the wrong time".

There are other actions to be taken when a client who has been raped presents to the clinic

Please refer to the Chapter on Rape and sexual assault in the Manual of standard managements in O&G for doctors, HEOs and nurses for detail.

CHAPTER 13

NORPLANT

[Only to be inserted by those specially trained to do so.]

Background
Norplant is a relatively new contraceptive method. It is not as yet (1995) available in PNG. It has been used by many thousands of women in Indonesia, Europe and Africa very successfully. It is
made in Finland. The Norplant system consists of six tiny silastic rubber rods filled with a progestin hormone. Silastic rubber does not react at all when inserted into the human body; however, it allows hormones to diffuse out of the rods at a fairly constant rate, and into the body.

How it works
The progestin seeps out of the tiny Norplant rods and into the woman's body. The implants prevent pregnancy for at least five years. Norplant prevents ovulation in most cycles and also makes the cervical mucous less penetrable to sperm.

Effectiveness
Norplant is at least 99% effective in preventing pregnancy for a five year period. After five years its effectiveness wears off slowly and the rods can be either removed or replaced.

Advantages
- very effective and does not need to be renewed for at least five years,
- no serious side effects,
- return of fertility is rapid after removal.

Disadvantages
- the process of removal and insertion are surgical and need specially trained personnel to perform them, and the Norplant implants are expensive,
- the insertion site may become infected,
- women can't discontinue on their own, and implants may be visible under skin,

Client assessment and screening
As Norplant is a progestin only contraceptive method, the screening steps and conditions are similar to those for depo provera and the breast feeding pill.

Method provision
Local anaesthetic is injected over the inner aspect of the upper arm. A small stab incision is made and the six rods introduced using a special trocar. The skin incision is sealed with a butterfly closure tape and a dressing applied.
See Chapter 12 of the National Family Planning Guidelines for PNG for more information on the Norplant System.
PERMANENT STERILIZATION

* Background, statistics and target groups
* Counselling
  - permanency
  - consent
  - consent forms
  - parity/gravity and sterilization, How many children is right?
  - the dangers of grandmultiparity
  - minimal side-effects of sterilization procedures
  - effectiveness
* Vasectomy
  - advantages and disadvantages
  - indications and contraindications
  - method provision
* Tubal Ligation
  - advantages and disadvantages
  - indications and contraindications
  - common misconceptions about tubal ligation
  - method provision and client instructions
  - laparoscopic TL, pre-operative instructions
  - minilap pre-operative instructions
  - after TL instructions

[Only performed by those specifically trained to carry out TL and vasectomy.]

COUPLES USUALLY THINK AND DISCUSS STERILIZATION FOR A LONG TIME BEFORE DECIDING. THEREFORE, MEN AND WOMEN SHOULD BE TOLD ABOUT STERILIZATION EVEN WHEN THEY WANT MORE CHILDREN, SO THAT THEY KNOW ABOUT THE METHOD FOR THE FUTURE.

Background
Sterilization is the most popular and effective method of family planning in the world today. Reasons for the popularity of tubal ligation (TL) and vasectomy are that they are so convenient and free of side effects. Over the past ten years the surgical procedures have been refined so that the modern techniques employ such small incisions. Sterilizations are nowadays truly minor operations with minimal skin incisions.

There are approximately 4000 TLs and 200 vasectomies performed each year in PNG. However, there are at least 12,000 grandmultiparas who deliver babies each year. Many rural women miss out on the option of TL because there are no surgical facilities close to their homes.

**Target Groups**

i) those who are sure that they do not want to have any more children,

ii) those with 4 children or pregnant with the 4th. ie. becoming grandmultiparas,

ii) women with high risk factors for further pregnancy including heart disease, diabetes, previous serious obstetrical problems, severe permanent psychiatric problems eg. chronic schizophrenics, mentally retarded etc.

**Counselling**

Counselling for sterilization is critical. For the client to make a voluntary choice of this method, he/she needs all relevant medical information about the procedure, and social and epidemiological facts about her risks with further pregnancy should she not have TL done.

1. **Permanency** - In PNG, for practical purposes, sterilization operations must be considered permanent. (Without microsurgical facilities surgical re-joining of the tubes has a poor success rate.) Because of the permanency of the method, couples need to have plenty of time to think carefully about the decision. Requests from grandmultiparas, those over the age of 35 years, those with medical problems, and those having their 3rd caesarean section can be treated seriously from the outset because they are unlikely to change their minds. However, with younger women of lower parity without medical problems, great care needs to be taken with counselling and obtaining informed consent, so that no person makes the decision without fully understanding that the procedure is not reversible.

People are less likely to change their minds when the decision has been made after much thought and over a period of time. For example women who want to stop having babies after the fifth child should be told about the availability of tubal ligation when having their third or fourth
baby. Then, when the fifth pregnancy comes along, they are familiar with the procedure and can choose it with equanimity.

2. **Consent for Sterilization** - Because sterilization procedures are permanent, it is advisable to obtain written consent from both husband and wife for the procedure and document the consent in the client's case notes. Although there is **NO** requirement in PNG law for a spouse's consent for their partner's sterilization, a joint decision is normal in PNG custom and will usually mean more satisfied clients and less complaints to health workers subsequently.

In rare cases it may not be possible to obtain written consent from the spouse at the time of the sterilization. For example:
- a grandmultipara who is separated and does not want any further pregnancy,
- a woman having a repeat caesarean section, and who says that she has discussed sterilization with her husband and he agrees, but he is not on hand at the moment to sign the consent form,
- a woman who has serious medical problems, (eg. heart disease) which means that further pregnancy would be dangerous to her, but the husband is not available to sign the consent form,
- a classical caesarean section needs to be done because of difficulty of lower segment access and the woman has expressed a desire to be sterilized if it is dangerous to have any more pregnancies.
- divorcees and widows.

**Note.** *Whenever spouse consent for sterilization is not available, always document in the client's records the reason for the lack of spouse consent.*

3. **Consent Forms** - Should you not have any consent forms available, you can easily write a short paper for the husband and wife to sign thus:

I,................ do not wish to have any more children and request doctor to do a small operation to sterilize me. (Signed)...................... I, ......................... spouse of .................... agree to this sterilization request and understand that it will not be possible for my spouse to have any further children after this operation. (Signed)..........................

Sterilization consent forms should be given to any woman or man requesting tubal ligation or vasectomy, and, as part of the counselling process at the **first** visit to the antenatal clinic, for women wanting or needing post partum TL. Then there is opportunity for questions to be asked and answered at subsequent antenatal visits and the form stapled to the antenatal card ready for the procedure straight after delivery. Whenever health workers refer antenatal mothers to
hospital with problems they should ask if any more children are wanted after this one. If not, a signed TL consent form should be sent with the mother.

4. **Issue of parity and sterilization** - How many children is the right number? - The number of children for each family is the right of each family to choose. However, as with many aspects of life, health workers should give responsible advice. Every person has the 'right' to smoke, but we all know that smoking is dangerous to health, and health workers should advise people to stop smoking, especially those with respiratory and heart problems. In the same way it is often medically not advisable to have more pregnancies. Health workers should advise women to consider sterilization as the safest and easiest way to stop. At the present time health workers should tend to advise couples regarding sterilization depending upon parity or gravity thus.

**Gravida 0 and 1.** Almost never agree to sterilization requests post partum unless a consensus of experienced doctors recommends it because of serious medical problems. (The normal woman should be encouraged to use other family planning methods: if she reaches the age of 35 and still insists on sterilization then it would be fair to agree.)

**Gravida 2.** Discourage most sterilization requests unless there are medical indications or the woman has had or is about to have her second caesarean. If a couple insist on sterilization after the second baby always bring up the possibility of infant death and the irreversibility of sterilization. However, we as health workers do not have the right to 'force' couples to have more than 2 children by denying them the means to stop having babies.

**Gravida 3.** Assess the request carefully. Make sure they understand that sterilization is permanent, and they really do not want any further children.

(It is worth mentioning TL to para 3s because although they may not want it at the moment, it may be needed after the next child, and by mentioning it now you will help to make it a familiar topic to them.)

**Gravida 4.** It is not medically advisable to have more than four pregnancies. The next pregnancy will make a woman a grand multipara. Always suggest TL to para 4s and congratulate the good sense of para 4s who request it or accede to your counselling.

**Gravida 5 or more.** It is definitely unwise to have more pregnancy when one is already a grandmultipara. Always encourage a grandmultipara to have TL unless there are good reasons for continuing fertility such as,
some children have died,
- she is in a new marriage and she and her spouse strongly desire further children, and her health is good.

In addition to the above, health workers need to remember that when advising clients about sterilization:
- rural folk tend to want more children than urban ones,
- educated parents usually want to limit family to a smaller number than uneducated ones,
- squatter settlement dwellers often want to limit their families to two or three children especially if they are not planning to return to their villages,
- those couples who have had children die will tend to want to have more replacement and `spare' children in case this happens again,
- some religious and tribal groups want more children than others,
- couples with children of predominantly the same sex may want additional children to balance out their family; however, it may be worthwhile reminding a grandmulti trying for more babies of a different sex that we parents do not choose the sex of our children, - that it is God's choice of what he gives to us.

5. The Dangers of Grand Multiparity - The uterus gets worn out just like other parts of our body as we get older. Dr. Bird used to say 'stay alive, don't have five'. The medical problems which can arise with increasing parity include,
- ruptured uterus from malpresentations and increasing fetal size,
- PPH from uterine atony (tiredness in the third stage) and retained placenta,
- anaemia, maternal malnutrition and premature ageing.

The maternal mortality rate in PNG varies from 1 - 10 per thousand births. The maternal death risk rises with increasing parity; moreover, the risk is cumulative, ie. by having ten children a woman has more than 10 times the chance of dying because of pregnancy. PPH and retained placenta are the two commonest things leading to maternal death in PNG. Both these risks are increased in the grand multipara.

If a young primigravida dies in childbirth everyone is very sorry for a short time and says how tragic it was that such a young person had to die. But if a grandmultipara dies in childbirth she leaves behind many children who will not forget the fact that they have been left as maternal orphans.
during the formative period of their lives. When the husband of the young primigravida gets over his grief and marries again, residual problems are minimal. However, when the husband of the grandmulti eventually remarries, the new wife is often somewhat younger and is not often interested in looking after the many children of the previous wife. She wants her own children too. The children of the previous wife may have a very sad life and even be dispersed amongst various relatives. A grandmulti needs to consider this scenario when contemplating further pregnancy, and balance her fear of the `little operation' against the possibility of dying with the next pregnancy.

6. **Minimal Side Effects** - There are virtually no long term problems associated with either TL or vasectomy. The only real side effects are pain at the operation site for a few days, and occasionally the wound may get infected.

7. **Effective** - Both TL and vasectomy are about 99.9% effective if done properly. Failures although rare may be due to poor surgical technique or recanalisation of the tubes.
**VAEECTOMY**
Sperms are made in the testes and carried to the penis in the fluid from the prostate gland called semen via a tube called the vas deferens. In vasectomy the vas is ligated at the top of the scrotum and sperms are no longer able to be mixed into the semen. After this small operation, men still have the same sexual desires, sexual performance, ejaculation of semen and excitement; however, if the semen is examined under the microscope one will find that there are no longer any sperms in the seminal fluid.

**Advantages**
- very effective and safe minor surgical procedure which can be done under local anesthesia(LA).
- no long term side effects and the couple do not have to worry about contraception ever again,
- the man is in control of fertility regulation in the family, and his wife will not have to worry about using any method of family planning unless she has another partner.

**Disadvantages**
- discomfort during and for a few days after the procedure,
- occasionally get a haematoma of the scrotum or inflammation of the wound,
- not effective straight away but is permanent once sperms are no long present in the semen.

**Vasectomy is an appropriate method for a man who:**
- is sure that he doesn't want more children and wants to take action himself,
- wants a permanent method with no bother or side effects afterwards,

**Vasectomy might not be the most appropriate method for a man who:**
- is single or who has not had the desired number of children yet,
- is having marital or psychological problems and is not sure of his future.

**Common misconceptions about Vasectomy**
1. "There will be difficulty with sex after vasectomy or there won't be sufficient ejaculatory fluid to satisfy." Vasectomy does not affect sexual performance or enjoyment. The fact that there are no longer any sperms in the semen is not noticeable by the man. The amount of ejaculatory fluid feels the same to the man who has had a vasectomy: the fluid also looks the same in terms of volume, smell, appearance and viscosity.

2. "Doctor may remove the testes and the man will be like a castrated pig". In the vasectomy operation, the doctor does not touch the testes; only the vas tube is ligated some distance from the testes at the top of the scrotum.
**Method provision and client instructions**

1. Vasectomy can be performed at any time under local anaesthesia.

2. Clients need to be counselled carefully that vasectomy is permanent, but that it takes about two months for all the sperms to finish from the semen.

3. The client should sign a consent form with his wife; he should take it to a hospital where vasectomies are performed (hospitals which have a surgeon or ObGyn SMO). At the hospital they will give him a time for the operation and show him where to shave the hair from his scrotal skin.

4. After the operation he will be able to go home the same day and return about seven days later for removal of the sutures.

5. The day of the operation he will need to rest at home, and then not do any heavy work for about one week.

6. You must warn all vasectomy clients that they will still be fertile for about two months after the operation. (The wife will need to continue her family planning method for this period.) Should the client wish to have his vasectomy's effectiveness proven, he can have a semen test performed 2 months after the operation.

7. Should the scrotum become very swollen or painful some days after the vasectomy operation, there may be a haematoma forming or some infection. If this happens he should report to the clinic or his nearest health worker for treatment.

8. The client can resume sex from about 10 days after the operation.
TUBAL LIGATION

From menarche to menopause, the normal woman ripens an ovum every month except when she is using family planning or is pregnant or post partum. The egg is fertilised in the fallopian tube and travels down this tube to the uterus. When a woman undergoes tubal ligation fertilization can no longer take place.

Advantages
- immediately effective, safe and permanent,
- no long term side effects and the couple never have to worry about FP again,
- can be done with a very minor operation using an incision only 2cm long.

Disadvantages
- small pain at the incision site for a couple of days after the operation,
- occasionally there may be an infection or haematoma of the wound after the operation: this is easily treated.
- can not be reversed easily in PNG.

Tubal Ligations is a good method for a woman who:
- is sure that she and her husband do not want any more children,
- wants a very effective method with no bother afterwards.

Tubal Ligations may not be an appropriate method for a woman who:
- is single or who has not had any children yet,
- is not sure whether she or her husband want any more children.
- has psychological or marital problems.

Common misconceptions about Tubal Ligation
1. "TL is not suitable for village women because they will not be able to do all the heavy work necessary in the village after the operation." TL operation is a very minor procedure and does not affect in any way a woman's ability to perform heavy work. Indeed she will probably be more fit to do heavy work after the TL because she will not be getting pregnant any more.

2. "TL causes abdominal pain or other kinds of sickness." Tying a woman's fallopian tube does not interfere with her bodily functions in any way. It does not cause abdominal pain nor any
sickness. Many village women localise pain to abdominal wall scars when they get other sicknesses for psychological reasons.

3. "After TL the woman may not have proper periods or be able to have sex properly." TL does not alter a woman's periods and can not interfere with her enjoyment of sex (except to make her feel less inhibited because there is no longer the fear of pregnancy every time she sleeps with her husband).

**Method Provision and client instructions**

There are two types of tubal ligation procedures currently practice in PNG: **minilaparotomy and laparoscopy**. For both, spinal, general or local anaesthesia with sedation can be used depending upon the patient's and doctor's preference. However, local anaesthesia is the safer anaesthetic and should be used most times unless there are special circumstances. Always pre-med patients before taking them to the theatre; this makes them less anxious when they arrive in the theatre and there will then be less problems with anaesthesia.

1. With Minilaparotomy a 2-3 cm cut is made either just below the umbilicus or suprapubically (depending upon whether the woman is post partum or not). The abdomen is opened, tubes identified, ligated and the abdomen closed in layers.

2. With laparoscopy the procedure is done using a special telescopic instrument which is introduced into the abdomen through a tiny cut just below the umbilicus.

3. Tubal ligations can be performed at any time, but the common times that they are done are:
   - immediately (up to 10 days) after the birth of a baby the operation can be done through a very small incision because the uterus is readily palpable in the abdomen and minilap is very simple.
   - at the time of miscarriage/abortion either laparoscopically or with minilap,
   - with caesarean section when the abdomen is already open for this operation,
   - at other times not related to a pregnancy special technique is used for minilap; otherwise this is the ideal time to have TL laparoscopically.

**Minilap: Pre-op instructions (to be given on the day of the operation)**

1. Give your signed TL form to doctor or sister to put in the hospital notes,
2. On the day of the operation you will be told to stop eating & drinking some hours before the time of the operation: a little time before going to theatre you will be given an injection or some medicine to make you feel relaxed,

3. In the theatre the doctor will inject local anaesthetic just below your umbilicus or suprapubically and make a very small cut to get your tube which is then tied. At the end of the operation the skin is stitched up with just one stitch and a small dressing is applied to you abdomen. The whole procedure takes only about 10 - 20 minutes.

4. After you come back to the ward you are able to eat and drink again and sister will give you some medicine for pain if you need it.

5. The same afternoon/evening you will be able to get up out of bed and go to the toilet. Probably you will be able to leave the hospital the next day if you have somewhere to stay nearby.

6. You should go to a clinic about one week later to have your stitch removed.

**Laparoscopic TL: Pre-op instructions(to be given on the day of the procedure)**

1. Give your signed TL form to doctor or sister to put in the hospital notes.

2. On the day of the operation you will be told not to eat or drink anything for some hours before you are taken to the theatre.

3. Before going to the theatre sister will give you some medicine or an injection to make you feel relaxed.

4. In the theatre you will have an injection in the hand to put you to sleep, or an injection in the umbilicus so that you do not feel pain when the laparoscope is put into your abdomen. The whole procedure takes only about 10-15 minutes.

Back in the ward sister will give you some medicine should you feel some pain, and you will probably be allowed to go home the same evening if you have somewhere to stay nearby. Doctor will ask you to come back for a check up a couple of days later. There will probably be no stitches to remove.
After Tubal Ligation

1. For about a week after the TL a woman should not do hard work or have sex.
2. She will feel some little pain in her abdomen for a couple of days which can be relieved by Paracetamol or Aspirin etc.
3. She should see a health worker if the wound gets more painful a few days after the operation or discharges any fluid or pus.
4. After a couple of weeks the woman is fit to do all her normal heavy work and play sport as she wishes.
GENITAL TRACT INFECTIONS (GTIs)

Genital tract infections (GTIs) are infections of the genital tract which are usually sexually transmitted. GTIs are frequently encountered in family planning clinics because women trust family planning workers with their problems in the genital area, and also because family planning workers probably do more `routine' vaginal examinations than any other health workers.

**Presenting symptoms of GTIs**
- vaginal discharge which may produce vulval itch or vaginal irritation,
- lower abdominal pain or dyspareunia (pain with intercourse),
- genital ulcers with or without groin glands,
- dysmenorrhoea (painful periods) or dysuria.

**Vaginal Discharge**
The type of vaginal discharge is helpful in making the diagnosis of the problem,
- *Monilia* produces a white discharge which makes the vulva itchy,
- *Trichomonas* produces a frothy, watery discharge some itch and a smell,
- *Chlamydia* produces a cervicitis which bleeds easily on contact or with sex but there is little discharge,
- *Gonorrhoea* produces a pussy cervicitis, but when the infection moves inside the pelvis to cause PID there is usually no vaginal discharge at this stage; GC infection does not smell bad,
- *Bacterial vaginosis* produces a grey mucous discharge with some itchiness and unpleasant smell.

**Genital ulcers or sores**
Genital ulcers are often associated with groin glands; and may be caused by,
- *Syphilis* usually produces a single painless ulcer about the size of 2 toea,
- *Chanchroid* begins as a lump and turns into a dirty painful ulcer,
- *Donavanosis* begins as small painless ulcers, but these can grow to be large, granulomatous and become painful with secondary infection; these are typically found in the fourchette and on the perineum. There are often associated groin glands which can also ulcerate.
- **LYMPHOGRANULOMA VENEREUM (LGV)**
  produces lesions similar to Donavanosis but they are less granulomatous and tend to form more scarring and sinuses.
- Other lesions which can grow on the genitals include, **condylomata accuminata** (venereal warts), condylomata lata (of secondary syphilis), infected fungal rashes. Cancer of the vulva is very rare in the fertile age group.

**Lower abdominal pain, dyspareunia, dysmenorrhoea and dysuria** may all be associated with PID. However, most women with PID are not fertile and will not be presenting to family planning clinics seeking FP. They are more likely to present with sterility.

**MONILIASIS (ALSO CALLED CANDIDIASIS AND THRUSH)**
It is caused by a yeast fungus. It is very common; not usually sexually transmitted. Some women have frequent recurrences; some have no symptoms.

**Clinical features**
- white discharge and vulval itch,
- intercourse often uncomfortable and dysuria sometimes present,
- vaginal wall is red/inflamed, and there are white patches like milk curds,
- more common in diabetics (when there may be vulvitis as well), women on antibiotics or the combined OCP and pregnant women.

**Pathology test**
Confirmation is made by placing a sample of vaginal secretions on a slide, adding a drop of 10% KOH and observing the hyphae and yeast buds under the low power of the microscope.

**Treatment** is Mycostatin cream and/or vaginal tablets for 7 days from PHD. The client may also purchase Chlortrimazole and/or Miconazole cream and tablets which are more effective. Advise the client to wipe the anus from front to back after toilet and wear clean cotton underwear daily.

**TRICHOMEONIASIS**
Caused by the motile, flagellated protozoa called Trichomonas vaginalis. It is sexually transmitted, but most men do not feel any symptoms when they are carriers of the infection.
**Clinical features**
- Vaginal discharge may have an unpleasant smell and cause itchiness,
- The discharge is frothy and watery; it may be blood stained in pregnancy.

**Pathology test**
Confirmation is made by placing a drop of the vaginal discharge on a slide and adding a drop of saline; the motile trichomonads can be seen moving around.

**Treatment**
Tinidazole 2g stat for both partners, or Metronidazole 400mg tds for 5 days for both partners.

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**BACTERIAL VAGINOSIS**

Caused by an overgrowth of Gardnerella vaginalis and/or anaerobes replacing the normal vaginal flora of lactobacilli.

**Clinical features**
- Unpleasant fishy smell of vaginal discharge,
- May be itchy.

**Pathology test**
The vaginal ph is usually higher than 4.5. The fishy odour is intensified if a drop of KOH is added to the discharge (Whiff test). Wet prep slide shows more than 20% epithelial cells covered with small bacteria giving the appearance of 'Clue cells'. A gram stain shows that instead of predominance of gram +ve lactobacilli there are a predominance of gram negatives.

**Treatment**
Tinidazole 2g stat or Metronidazole 400mg tds for 5 days.

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**GONORRHOEA**

The bacteria N. gonorrhoea is sexually transmitted. However, most women do not present with the inoffensive vaginal discharge until the infection spreads into the pelvis (PID): at this stage there may no longer be any vaginal discharge. About 80% of women feel no symptoms in the early stages of disease.
**Clinical features**
- purulent vaginal discharge with occasional inflammation of the cervix.
- sometimes dysuria is present.
(If lower abdominal pain has developed, then the infection has already spread into the pelvis (PID). The infection spreads up into the tubes when the next period comes.)

**Pathology test**
Gram stain reveals typical intracellular gram -ve diplococci.

**Treatment**
Amoxycillin 3g and Probenecid 1g for both partners. In some areas where penicillin resistance is common, Augmentin should be used with the Amoxycillin and Probencid. Alternative treatment is Doxycycline bd for 10 days or Spectinomycin 2g by injection im stat.

**CHLAMYDIA (NON-GONOCOCCAL URETHRITIS/CERVICITIS, NSU)**

Caused by very small bacteria called Chlamydia trachomatis. This germ is very difficult to see using an ordinary microscope. It can not be cultured in PNG laboratories at this time.

**Clinical features**
(Most women -and men- feel NO symptoms with Chlamydial infections.)
- mucopurulent cervical or urethral discharge,
- the columnar epethelium (that part of the cervix around the os, - ie. what some people call the `erosion`) is beefy red and bleeds easily when touched.
- there may be dysuria, however, lower abdominal pain means that the infection has spread into the pelvis and caused PID.

**Pathology test**
Unfortunately there are no tests available in PNG to detect this infection.

**Treatment**
Doxycycline 100mg bd for 10 days for both partners. In pregnancy Erythromycin should be used instead.
**SYPHILIS**
Caused by bacteria Treponema pallidum. Sexually transmitted. Primary Syphilis causes an ulcer to appear on the genitals about 10 days after the infecting sex; later on the infection can spread to the whole body if it is not treated. A few weeks or months after the ulcer goes away, rash and fever develop with lesions under the arms, breasts or groins called condylomata lata. Again if this is not treated this stage goes away and then there is a long period of latency (ie. no symptoms) before the tertiary syphilis eventually causes heart and brain problems which can kill the person.

**Clinical features of the primary ulcer**
- the ulcer develops about 2 weeks after contact. It is painless and clean, and usually the size of a 2 toea. Sometimes there may be two ulcers.
- there are enlarged non-tender rubbery groin glands,

**Pathology tests**
- in the primary stage dark ground illumination under the microscope reveals the spirochetal bacteria,
- in the latent phase serology (VDRL, TPHA, RPR) is the only way to diagnose.

**Treatment**
Benzathine penicillin 2.4 million units stat for both partners. If the infection is diagnosed serologically (ie. by VDRL etc.) then they should receive weekly in Benzathine Penicillin 2.4 megaunits for three doses.

**Chancroid**
Chancroid is sexually transmitted and caused by a bacteria Haemophilis ducreyi. It is not common in PNG.

**Clinical features**
- the lesions are dirty and painful,
- swellings form in the groins which may rupture and form fistulae.

**Pathology tests**
Gram stain of the exudate reveals gram -ve coccobacilli in chains.

**Treatment**
Cotrimoxazole 2 bd or Doxycycline 100mg bd for 10 days for both partners.

**DONOVANOSIS**
This sexually transmitted disease is caused by the bacteria *Calymatobacteria granulomata*.

**Clinical features.**
- lesions begin as little lumps which grow and ulcerate to form beefy, red exophytic (ie. granulatot tissue which stand up out of the ulcer) ulcers.
- the lesions are typically found in the perineum and on the fourchette of a woman.
- the lesions are painless at the outset, but soon become painful when they get secondarily infected.
- enlarged groin glands eventually ulcerate into the same kind of beefy red granulomatous lesions.

**Pathology tests**
Biopsy specimen of the edge of the ulcer may reveal intra-cytoplasmic inclusion bodies called 'Donovan bodies'.

**Treatment**
Doxycycline 100mg bd for 2 - 6 weeks depending upon the size of the lesions to be treated. The treatment span can be shorted by surgical excision of the lesions if this is possible. In pregnancy and during breast feeding, Chloramphenical is used instead of Doxycycline. When available, Azithromycin will be the most suitable drug for both pregnant and the non-pregnant woman.

**SPECIAL NEEDS OF HIV POSITIVE PERSONS AND FAMILY PLANNING**

HIV positive persons need family planning too! HIV positive persons have special needs and challenges in the family planning area. FP options for HIV positive people are difficult, but we must try and assist with what is effective and possible for the individual circumstances of the person and couple. FP is the most effective ways of preventing parent to child transmission of HIV.

HIV is a life long disease that is difficult to treat, usually leads to early death and which people are very fearful about and often want to hide from others. In spite of treatment (ARTs and drugs for opportunistic infections, TB etc) the life expectancy of HIV positive people after diagnosis is usually less than 10 years. Most people with life threatening medical conditions do not contemplate further pregnancy, but HIV often affects quite young people who have not fully
expressed their fertility and have difficulty contemplating family not able to pass on the virus to a baby either in-utero or by breast feeding either.

Social issues that a common for HIV people.

Many HIV positive people do not have very stable domestic lives because they are either young, single or both. This makes family planning counseling a big challenge.

Counseling issues
1. Has the client completely come to terms with their diagnosis of HIV
   Post-test counseling is an ongoing process that can stretch over months or even years. There are many issues to be covered, and it is not reasonable to try and cover them all in just a few counseling sessions.

2. The implications of being HIV positive for the person themselves; why it is so important that you have found out that you are HIV positive early, keeping healthy, what happens when you get sick, what to expect, how to keep check on your condition, the need for treatment of infections and when to begin anti-retroviral medicines (ARTs)

3. Disclosure, advantages, disadvantages, need for support in present and future life,

4. If disclosure to sex partner(s) is agreed to then it is important to try and meet each partner and do VCT. To encourage acceptance of testing it is best to emphasize the advantages of finding out if you are negative (so that you can stay negative), or positive (so that you have a better chance of taking care of yourself the earlier in the disease you find out what you are positive.

5. Pregnancy issues; if you want to have a baby, why it is important not to get pregnancy if you do not want to and how to best avoid HIV getting to the baby.

6. Not giving the virus to any sex partners. It is very important to counsel HIV positive people about why it is important not to transmit the virus to anybody else, and how they cannot spread HIV to others. No matter what method of family planning they decide to use, they should use condoms with all sex partners who are negative or if they do not know their HIV status.

7. Safe and Effective Family Planning for HIV positive women.
Some women will realize that it is not a good idea to have any more children once they have found out that they have a life-long and serious medical condition, in which case tubal ligation is be an acceptable option even if they only had one or two children.

IUD

There is no contra-indication for the use of an IUD in HIV disease unless the woman is seriously immuno-compromised. If an HIV positive woman’s immune system starts to deteriorate she does not have to have her IUD removed as long as she is able to begin ARTs and stop further immune deterioration. If CD$ count is above 300. For women with a serious medical condition IUD is one of the best methods of family planning because it does not require the woman to frequently or regularly renew the method. An IUD can be kept for 12-15 years which can last the woman her remaining life span if she so desires.

However, IUD does not prevent transmission of STIs or HIV and should be used with condoms for dual protection if there is any risk of passing on the virus or getting another STI.

Depo provera or Implants
Depo and implant are other good long term methods of family planning of HIV positive people. However, it may be difficult for a young HIV positive woman to keep up her injection every 3 months and then unintended pregnancy may occur. These methods do not prevent transmission of STIs.

Tubal Ligation
TL should be agreed to if the woman has made up her mind that she does not want any further pregnancy. TL does not prevent transmission of STIs.

Condoms
Both male and female condoms should be offered to HIV positive people to protect them from getting other STIs, and also to prevent them from transmitting the virus to others. Condoms should be recommended to augment family planning even when a woman is using another method (eg. IUD or Depo etc) so as to prevent STI transmission. This is called “dual protection”.

Other methods.
Pills and natural methods may not be used reliably by young people and therefore are not usually recommended for HIV positive people. If they are used to prevent pregnancy, dual protection using condoms should be advised too.