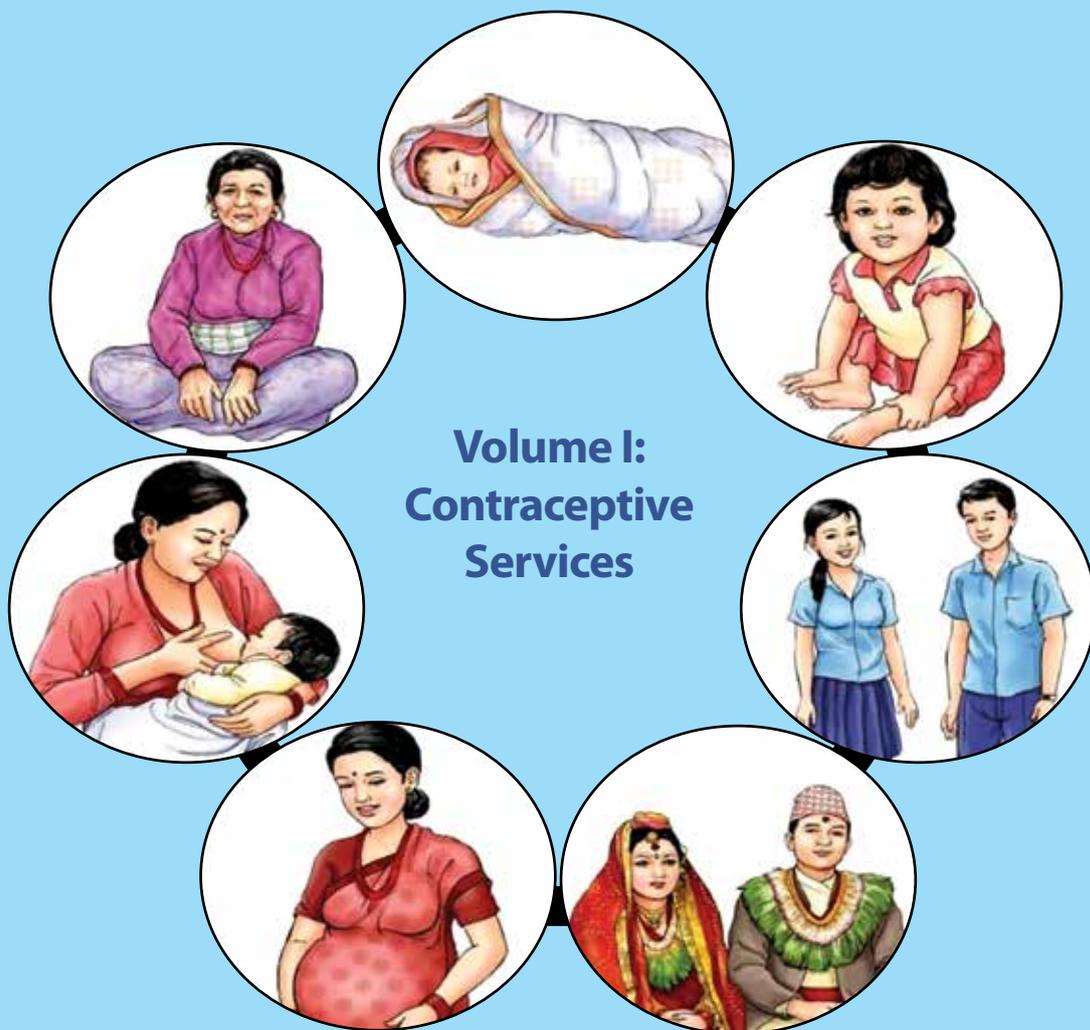


NATIONAL MEDICAL STANDARD FOR REPRODUCTIVE HEALTH



Volume I: Contraceptive Services



Government of Nepal
Ministry of Health and Population
Department of Health Services
Family Welfare Division
June 2020

NATIONAL MEDICAL STANDARD FOR REPRODUCTIVE HEALTH

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June 2020



Government of Nepal
Ministry of Health and Population

Department of Health Services

Teku, Kathmandu



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FOREWORD

It is my pleasure to share the *National Medical Standard for Reproductive Health (NMS-RH) Volume I: Contraceptive Services, fifth edition*, which has incorporated the latest evidence based technical and policy updates including federal context. We expect that, this would serve as a guideline for the managers and supervisors to improve the quality of family planning services at all level of healthcare system. This standard provides accurate and up-to date information that will also help family planning providers to update their knowledge and offer quality family planning services effectively and safely.

I would like to acknowledge and thank DFID for financial support, UNFPA for financial and technical support, and Jhpiego for taking the lead to update this Standard and all the experts who have contributed to update this edition of National Medical Standard for Reproductive Health Volume I: Contraceptive Services.

.....
Dr. Dipendra Raman Singh
(Director General)



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ACKNOWLEDGEMENT

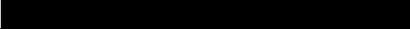
The National Medical Standard for Contraceptive Services was first published in 1991. In order to keep up with technical advances and changes in contraceptive technology and policy, it was reviewed and published in 1995 and in 2001 as the National Medical Standard for Reproductive Health (NMS-RH) Volume I: Contraceptive Services.

I would like to acknowledge the efforts of all who have contributed their valuable input in updating the National Medical Standard and would also like to thank members of NMS RH Vol I, Technical Working Group (TWG) and Family Planning Sub-committee (FPSC).

I would like to acknowledge valuable suggestions received from representatives of ADRA/Nepal, Chhetrapati Family Welfare Centre (CFWC), FPAN, Health and Development Support (HEADS), Ipas Nepal, Institute of Medicine, Jhpiego, Management Division, Marie Stopes International (MSI) Nepal, Nepal CRS, National Health Training Centre, National Health, Education, Information and Communication Centre, Nepal CRS Company, Nepali Fertility Care Centre, Nepal Health System Support Programme, Paropakar Maternity and Women's Hospital, PSI/Nepal, Suaahara, System Strengthening for Better Health (SSBH), Tribhuvan University and Teaching Hospital (TUTH), United Nations Population Fund (UNFPA), United States Aid for International Development (USAID) Nepal and World Health Organization.

I would like to thank DFID and UNFPA for the financial and technical assistance and Jhpiego Corporation for technical support to update this edition. All update is based on national and international evidence-based practices, references and programmatic experiences of Nepal. I am sure that it will serve as a guidance to all health professionals to deliver quality family planning services and programme managers to expand and improve the quality of family planning services through all levels of delivery points in Nepal.

Dr. Bhim Singh Tinkari
Director
Family Welfare Division
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LIST OF ABBREVIATION

AIDS	Acquired Immuno Deficiency Syndrome
AHW	Auxiliary Health Worker
ANM	Auxiliary Nurse Midwife
ARV	Antiretroviral
BP	Blood Pressure
CFWC	Chhetrapati Family Welfare Center
CMA	Community Medical Assistant
CPR	Contraceptive Prevalence Rate
CYP	Couple Years Protection
COC	Combined Oral Contraceptive
COFP	Comprehensive Family Planning
DHO	District Health Office
DMPA	Depo Medroxy Progesterone Acetate
DPHO	District Public Health Office
DVT	Deep Vein Thrombosis
EE	Ethinyl Estradiol
FCHV	Female Community Health Volunteer
FWD	Family Welfare Division
FHI	Family Health International
FPA	Family Planning Assistant
FPAN	Family Planning Association of Nepal
HA	Health Assistant
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HCW	Health Care Worker
HLD	High Level Disinfectant
HIV	Human Immuno Deficiency Virus
GoN	Government of Nepal
HMIS	Health Management Information System
IPPF	International Planned Parenthood Federation
IUCD	Intrauterine Contraceptive Device
IV	Intravenous
JSI	John Snow Incorporated
LAM	Lactational Amenorrhoea Method
LMP	Last Menstrual Period
MCHW	Maternal Child Health Worker
MO	Medical Officer
MOHP	Ministry of Health and Population
NFCC	Nepal Fertility Care Center
NFP	Natural Family Planning

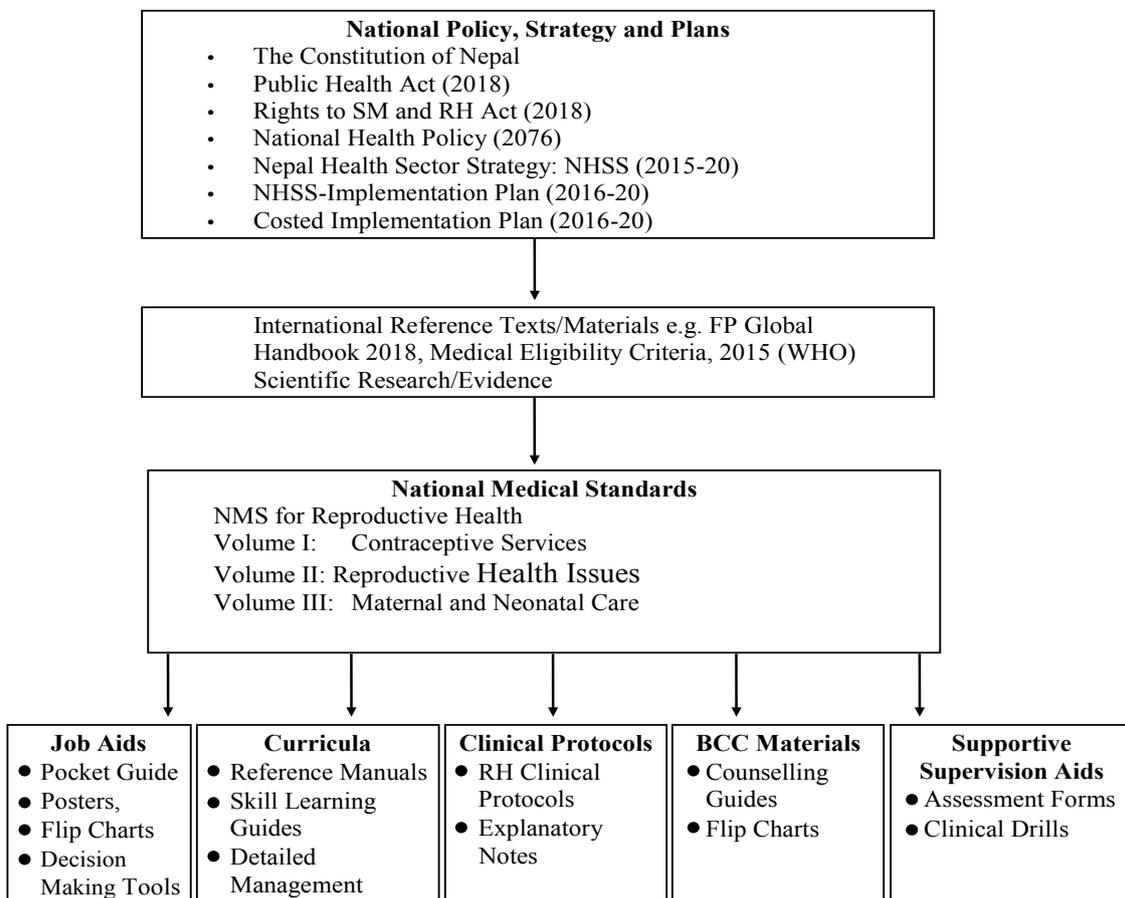
NGO	Non-Governmental Organization
NHTC	National Health Training Centre
NMS-RH	National Medical Standard for Reproductive Health
NSV	No-Scalpel Vasectomy
PID	Pelvic Inflammatory Disease
OC	Oral Contraceptive
PIC	Progestin Injectable Contraceptive
POC	Progestin Only Contraceptive
POP	Progestin Only Pills
QOCCMC	Quality of Care Management Centre
RH	Reproductive Health
SBE	Subacute Bacterial Endocarditis
SN	Staff Nurse
STIs	Sexually Transmitted Infections
TBAs	Traditional Birth Attendants
TUTH	Tribhuban University Teaching Hospital
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
VHW	Village Health Worker
VSC	Voluntary Surgical Contraception
WHO	World Health Organization

INTRODUCTION

The National Medical Standard for Reproductive Health is designed to provide policymakers, health officers, hospital directors or health facility in-charges, clinical supervisors and service providers of all level of governments in federal context with accessible, clinically-oriented information to guide the provision of reproductive health services in Nepal. This Volume I contains standards for contraceptive services, Volume II includes the remaining reproductive health issues and Volume III includes maternal and neonatal care as outlined in the ICPD.

The National Medical Standard for Reproductive Health reflects the national health policy as well as Safe-motherhood and Reproductive Health Rights and Pubic Health Acts, and relies on international reference materials and scientific evidences. The standards serve as a country-specific reference document for essential clinical materials and tools that support patient care and service provision.

National-Level RH Materials



The information in the NMS-RH Volume I states the medical eligibility criteria for use of contraceptive methods, and sets a national standard for the provision of these services. The document is divided into three sections to aid the reader when accessing information.

SECTION I

Chapters in Section I address the national standards for counselling, client assessment, infection prevention, and quality improvement in family planning services, and management systems for provision of family planning services in Nepal.

SECTION II

In Section II, national standards for specific contraceptive methods available in Nepal are presented by chapter, each organized to include introduction, pre-requisites, counselling and informed consent, indications/precautions, client assessment, method provision, client instructions/follow-up, side effects, and requirements for facilities and providers. In addition, information on laparoscopic tubectomy, sterilization during Caesarean section and recanalization of tubectomy and vasectomy has been added.

SECTION III

Section III of these standards takes into account clients with special needs, such as a woman with a specific medical problem (e.g., women with post-abortion complications, STI), or a woman in a particular age group. The Appendices include specific forms, lists of essential instruments and facility criteria required in Nepal.

When possible, the NMS refers readers and clinicians to specific GoN clinical guidelines and protocols (such as the Reproductive Health Clinical Protocols, the National STD Case Management Guidelines and the NHTC method-specific training materials) that provide more information to guide practicing clinicians as well as specific references.

The information in the NMS is based on the latest material available and expert advice from Nepali reproductive health particularly in family planning. Important reference documents for this volume include: Family Planning: A Global Handbook for Providers 2018, WHO developed through worldwide collaboration and Medical Eligibility Criteria for Contraceptive Use 2015 (WHO).



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SECTION I: SERVICE PROVISION

CHAPTER 1

COUNSELLING, INFORMED CHOICE AND CLIENT RIGHT

1.1 INTRODUCTION

The Universal Declaration of Human Rights¹ (UDHR) was proclaimed by the United Nations General Assembly in Paris on 10 December 1948 (General Assembly resolution 217 A) as a common standard of achievements for all peoples and all nations. It set out, for the first time, fundamental human rights to be universally protected. In Article 25, it mentions that ‘Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family’.

1.2 REPRODUCTIVE HEALTH RIGHTS

The International Conference on Population and Development (ICPD), which was held in 1994 in Cairo where 179 government’s representatives participated, adopted a revolutionary Programme of Action and called for women’s reproductive health and rights to take centre stage in national and global development efforts.

Specifically, the Programme of Action called for all people to have access to comprehensive reproductive healthcare, including voluntary family planning, safe pregnancy and childbirth services, and the prevention and treatment of sexually transmitted infections. It also recognized that reproductive health and women’s empowerment are intertwined, and that both are necessary for the advancement of society.

“The full and equal participation of women in civil, cultural, economic, political and social life, at the national, regional and international levels, and the eradication of all forms of discrimination on grounds of sex, are priority objectives of the international community,” the Programme of Action affirmed.

After ICPD, its global community is referring to the global consensus that reproductive health and rights are human rights, that these are a precondition for women’s empowerment, and that women’s equality is a precondition for securing the well-being and prosperity of all people.

1.2.1 Reproductive Health²

Reproductive health is “a state of complete physical, mental and social well-being and, not merely the absence of disease or infirmity, in all matters relating to the reproductive system and its functions and processes.

Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the rights of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice,

1 <https://www.un.org/en/universal-declaration-human-rights/>

2 <https://www.who.int/westernpacific/health-topics/reproductive-health>

as well as other methods of their choice for the regulation of fertility which are not against the law, and the right of access to appropriate healthcare services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant.”

The Constitution of Nepal has established ‘health as basic human right’ and has mentioned family planning for population management. Similarly, the **Safe-motherhood and Reproductive Health Rights Act, GoN, 2018** along with sexual and reproductive health, has established family planning as a right of the individuals.

1.2.2 Rights of Clients and Needs of Provider³

The Rights of Clients

Information: Clients have a right to accurate, appropriate, understandable, and unambiguous information related to reproductive health and sexuality, and to overall health. Information and materials for clients need to be available in all parts of the healthcare facility.

Access to services: Clients have a right to services that are affordable, are available at convenient times and places, are fully accessible with no physical barriers, and have no inappropriate eligibility requirements or social barriers, including discrimination based on sex, gender, age, marital status, fertility, nationality or ethnicity, social class, religion, or sexual orientation.

Informed choice: Clients have a right to make a voluntary, well-considered decision that is based on options, comprehensible information, and understanding. The informed choice process is a continuum that begins in the community, where people get information even before they come to a facility for services. It is the service provider’s responsibility either to confirm that a client has made an informed choice or to help the client reach an informed choice.

Safe services: Clients have a right to safe services, which require skilled providers, attention to infection prevention, and appropriate and effective medical practices. Safe services also mean proper use of service-delivery guidelines, quality assurance mechanisms within the facility, counselling and instructions for clients, and recognition and management of complications related to medical and surgical procedures.

Privacy and confidentiality: Clients have a right to privacy and confidentiality during the delivery of services. This includes privacy and confidentiality during counselling, physical examinations, and clinical procedures, as well as in the staff’s handling of clients’ medical records and other personal information.

Dignity, comfort, and expression of opinion: All clients have the right to be treated with respect and consideration. Service providers need to ensure that clients are as comfortable as possible during the procedures. Clients should be encouraged to express their views freely, even when their views differ from those of service providers.

Continuity of care: All clients have a right to continuity of services, supplies, referrals, and follow-up necessary to maintaining their health.

3 Based on COPE Reproductive Health Toolbook, EngenderHealth, 2003 (Adapted from: Huezo & Diaz, 1993; IPPF, 1993.).

1.2.3 The Needs of Healthcare Staff

Facilitative supervision and management: Healthcare staff function best in a supportive work environment in which supervisors and managers encourage quality improvement and value their worth. Such supervision enables staff to perform their tasks well and thus better meet the needs of their clients.

Information, training, and development: Healthcare staff need knowledge, skills, and ongoing training and professional development opportunities to remain up-to-date in their field and to continuously improve the quality of services they deliver.

Supplies, equipment, and infrastructure: Healthcare staff need reliable, sufficient inventories of supplies, instruments, and working equipment, as well as the infrastructure necessary to ensure the uninterrupted delivery of high-quality services.

1.3 INFORMED CHOICE, COUNSELLING AND INFORMED CONSENT

1.3.1 Informed choice is the process that a client passes through to make a voluntary, **well-considered decision** about his/her reproductive health (RH) needs. The client arrives at this decision based on accurate and comprehensible information (Effective mode of action, advantage and disadvantage, etc.) in an environment of full information about available methods and resources inducing advantages and side effects.

Family planning counselling is a **process of two-way communication** by which the counsellor facilitates the client to make a decision about fertility and contraceptive options based on accurate, complete and comprehensible information, addressing the client's reproductive health needs, concerns and goals.

Whenever suitable, one should use the opportunity to do couple counselling. Couple counselling⁴: It is a strategic approach to engage the couple in shared decision making to meet their overall RH goals. Good couple counselling results in improved contraceptive use, improved couple communication and partner support for FP, improved knowledge about fertility and FP and increased male participation.

1.3.2 Strategies to Support Informed Choice

Following are the staff behaviours that promote informed choice:

- Provide information on a variety of methods including advantages and side effects
- Offer advice in a private, comfortable setting that fosters trust
- Focus on client's needs
- Adhere to client's rights and social equality
- Exhibit respect and mutual understanding

1.3.3 Principles of Family Planning Counselling

Effective family planning counselling is based on the following principles:

- **Client's needs:** Individuals have their own norms, values, beliefs, culture and attitudes—all of which influence decisions. Counselling is conducted in a respectful manner using a communication process that seeks to understand the client's needs and personal circumstances.

4 Couples Counseling in Reproductive Health: A Review of Literature, Institute for Reproductive Health, Georgetown University, 2017

- **Voluntary choice:** Decisions are based on complete, accurate and comprehensible information and must be made **free of pressure, intimidation, enticements, coercion or incentives**. Making a voluntary choice correlates with client compliance and satisfaction with the contraceptive method.
- **Empowerment:** Enables client to understand and exercise individual rights for decision making on a FP method. Counselling should be conducted in a non-judgemental, unbiased manner, without discrimination, based on economic, ethnic, linguistic, educational, gender, age or marital differences.
- **Confidentiality:** The content of a counselling session with a client must never be discussed by the counsellor or staff with outside staff or visitors, without the client's consent. The counselling session should be conducted in a private space where outsiders cannot overhear/view the interactions.
- **Consent:** Client's consent is required to provide any family planning methods. In terms of temporary FP methods (including short acting and long acting), verbal consent is sufficient. Verbal acknowledgement of client understanding about the method choice is required before providing the family planning method. With all voluntary surgical contraception (VSC) procedures, **a written, signed consent is required and mandatory**.
- **Use of appropriate IEC/visual materials⁵ for counselling:** Appropriate IEC (Information, education, and communication) materials should be used during counselling. IEC materials are visual aids that help the client understand and remember what has been discussed during counselling. They might include sample contraceptives, flipcharts, wall charts, take-home pamphlets, wallet cards, brochures, booklets, posters, pictures, models, drawings, audio, video and diagrams.

1.3.4 GATHER⁶ (ABHIBADAN)

In a good counselling, providers and their clients go through a series of connected and overlapping steps remembered as 'GATHER' which is translated in Nepal as ABHIBADAN (see Nepali version of details).

Follow the process of counselling using GATHER approach (Steps).

G – Stands for 'Greet'. The provider greets expressing respect and friendliness (culturally appropriate). This helps the client feel confident and willing to express feelings, ask questions and make a decision.

A – Stands for 'Ask'. The provider 'asks' questions effectively and listens actively to the client's answers.

T - Stands for 'Tell'. The provider responds to the client's situation, needs and concerns. The provider gives the client information so that the client reaches a decision and makes an informed choice.

H - Stands for 'Help'. The client and provider discuss the choices, their different results for the client, and how the client would feel about these results. In this way, the provider helps the client reach a decision.

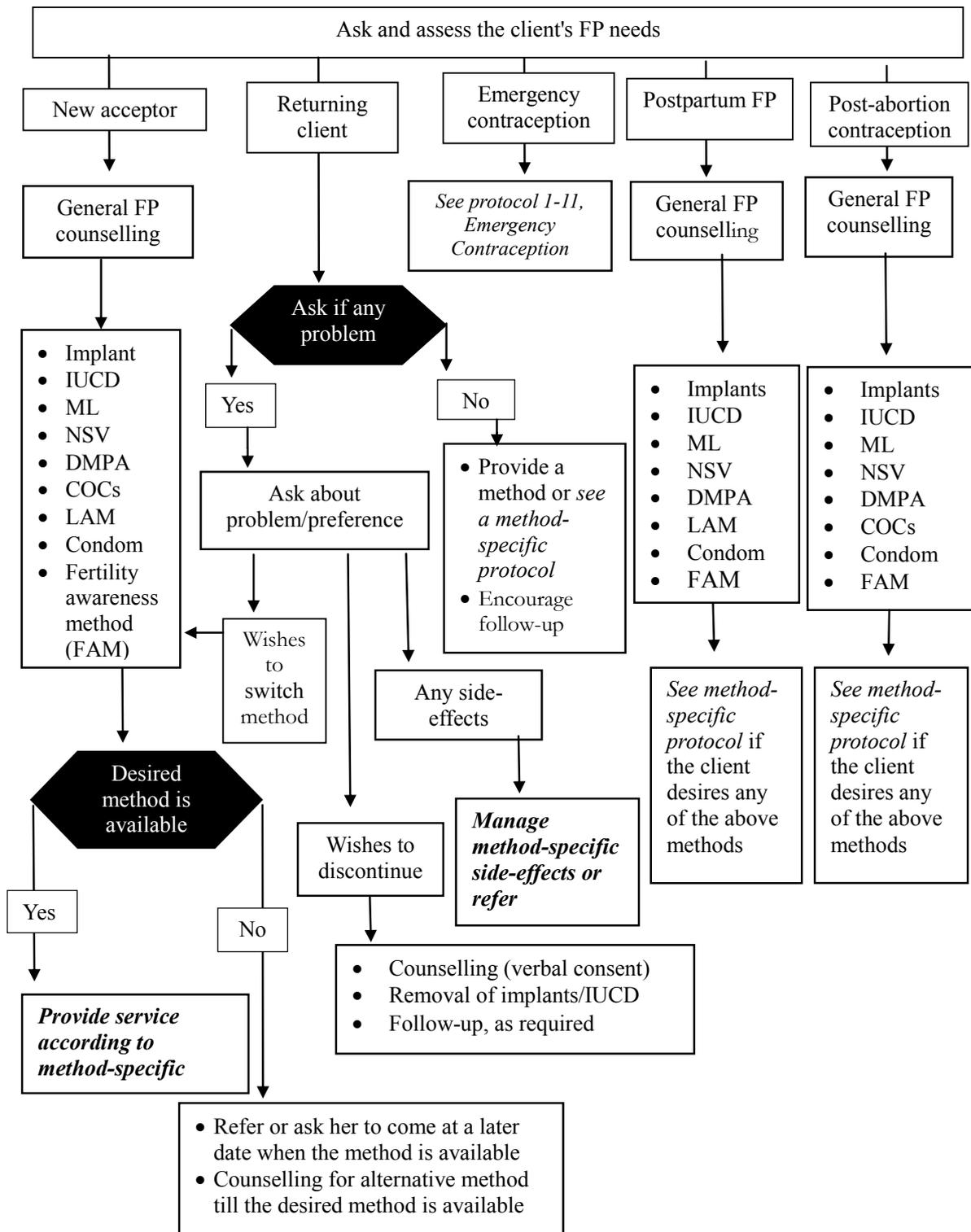
E - Stands for 'Explain. The provider explains to the client how to carry out the client's decision. The provider gives instructions in this regard.

R – Stands for 'Return'. All clients should be encouraged to return to reproductive healthcare provider whenever they wish, for any reason.

5 Using visual aids for Counseling, Counseling for Effective Use of Family Planning, Participant Handbook, Acquire Project, EngenderHealth/USAID, 2008

6 GATHER Guide to Counseling, Populations Reports, Vol XXVI, No 4, Series J, Number 48. Family Planning Program, JHU-CCP/USAID/USAID, Dec 1998.

COUNSELLING AND INFORMED CHOICE ALGORITHM⁷



7 RH Clinical Protocol, for Medical Officers, FWD, DoHS, 2076

1.4 INFORMED CONSENT

1.4.1 Informed consent is the client's voluntary decision to undergo a family planning procedure, in full possession and understanding of the relevant facts. Informed consents are taken verbally for temporary methods, while additional written consent is required for permanent methods. The consent form is a legal authorization for the procedure to be performed.

The consent form (see Appendix D I) becomes a legal document when signed/marked by the client. **A consent is valid and binding only if the client was fully informed and knowledgeable about the content of the consent before signing.**

- If a client is unable to read the consent, staff must read or explain in detail the contents of the document in a language understood by the client, and in the presence of a witness (preferably of the same sex as the client). The witness must also sign the consent to verify the client understands the content, and also verifies the client's mark/thumbprint.
- Since VSC procedures are permanent, in case of a married couple, it is **advisable, but not compulsory**, to obtain a jointly signed consent and if possible to include the client and spouse in the counselling session.
- The person executing the consent must also sign the document.
- The physician is responsible for ensuring that the informed consent is obtained. Thus, the physician's role is to oversee informed consent is obtained with proper client understanding by the family planning staff and the client has signed the informed consent form with full understanding.

Spousal consent for VSC is advisable, BUT NOT COMPULSORY.

Below are the seven elements of VSC services that the client must fully understand to obtain an informed consent:

1. Temporary contraceptive methods are available.
2. Voluntary sterilization is a surgical procedure.
3. Risks as well as benefits are associated with the procedure, both of which must be explained.
4. The procedure is permanent.
5. Successful procedures result in the inability to bear any more children.
6. There is a small possibility of method failure.
7. The client can decide against the operation at any time (without losing the right to other medical, health, or other services or benefits).

Special Considerations—Mobile and Seasonal VSC Sites

In mobile and seasonal VSC sites, clients frequently arrive at the site already having made a decision for the VSC procedure. At these sites, where there are large numbers of clients and time constraints, family planning information can be given to clients together in small groups. After completion of the group session the provider/registrar meets with each client privately to verify that the client's decision is based on accurate and complete understanding of the seven points in the informed consent form. If the client has insufficient knowledge and understanding, then the counsellor/screening nurse must conduct a thorough and private counselling session.

1.4.2 The Counselling Process

Family planning staff must be properly informed about importance of FP, **healthy timing and spacing of pregnancy** (HTSP) and available contraceptive methods and be able to assist potential users to make an informed choice. Information should be given to aid a client's choice, not to persuade, press or induce a person to use a particular method. Counselling service should be provided taking into account the general and reproductive rights of the client. Staff dealing with family planning clients must be trained in counselling techniques and have the appropriate materials and job aids to conduct the counselling session.

Family planning counselling is to be provided wherever family planning methods are available. The counselling session may be an individual session (client and service provider) or a couple counselling session (client with partner and service provider). As per the client's request and desire, a close friend or family member may be present in the counselling session.

Staff who have completed a certified counselling training or are certified in providing family planning contraceptive services may conduct counselling sessions.

For further information on the counselling process, refer to *The Comprehensive Family Planning (COFP)/Counselling Reference Manual*, National Health Training Centre (NHTC), 2016.

1.5 THE BALANCED COUNSELLING STRATEGY

In response to the need to incorporate counselling, screening, and services for sexually transmitted infections (STIs), including HIV, within routine family planning consultations in settings characterized by high prevalence of these infections, the BCS was revised to integrate STI/HIV prevention counselling, risk assessment, and HIV counselling and testing (HCT). The resulting Balanced Counselling Strategy Plus (BCS+) toolkit improves the quality of the family planning service and enables providers to address clients' needs related to STIs and HIV during the same consultation.

Integration of health services has been defined as offering a range of services that can meet several needs simultaneously, usually in the same venue and through the same provider. Referrals to, or link-ages with, related services enable a client to receive a range of needed services, even if the services are not received simultaneously.

The Balanced Counselling Strategy Plus (BCS+) is divided into four counselling stages. Each stage contains a sequence of steps to follow. The BCS+ assumes that the motive of a client's visit is family planning but serves to also offer the client additional counselling and services in the same facility or through referral. The BCS+ integrates post-partum counselling messages to ensure health of the mother and the infant; an opportunity to discuss healthy timing and spacing of pregnancies; counselling on STI/HIV transmission and prevention; screening for reproductive cancers; violence prevention; post-abortion care; and male and adolescent services. Information on the cards instructs providers through conducting an STI/HIV risk assessment, discussing dual protection and positive health, and discussing and offering the client HIV counselling and testing. The BCS+ process can be summarized as a decision-making algorithm, which is described on the next three pages. Below is a summary of the four counselling stages:

1.5.1 Pre-Choice Stage: During this stage, the provider creates the conditions that help a client select a family planning method. The provider cordially greets the client. The provider

emphasizes to the client that, during the consultation, other reproductive health issues will be addressed depending on her/his individual circumstance. The provider reviews the client's fertility intentions and counsels her/him on healthy timing and spacing of pregnancy. Pregnancy is ruled out using the counselling card with the checklist of questions. If the client is not pregnant, the provider displays all the method cards and asks questions described in the algorithm. As the client responds to each question, the provider sets aside the cards of the methods that are not appropriate for the client. Setting aside these cards helps to avoid giving information on methods that are not relevant to the client's needs. If pregnancy cannot be ruled out, the provider skips to steps 13 to 19 to discuss other relevant services the client may need. The client is given a backup method, such as condoms, and asked to return when she has her menstruation.

1.5.2 Method Choice Stage: During this stage, the provider offers more extensive information about the methods that have not been set aside, including their effectiveness. This helps the client select a method suited to her/his reproductive needs. Following the steps in the BCS+ algorithm, the provider continues to narrow down the number of counselling method cards until a method is chosen.

1.5.3 Post-Choice Stage: During this stage, the provider uses the method brochure to give the client complete information about the method that s/he has chosen. If the client has conditions where the method is not advised or is not satisfied with the method, the provider returns to the Method Choice Stage to help the client select another method. The provider also encourages the client to involve her/his partner(s) in decisions about contraception, either through discussion or visit to the clinic.

1.5.4 Systematic Screening for Other Services Stage: During this stage, the provider uses information collected previously and targeted questions to determine additional health services and counselling that the family planning client may need. Using the remaining counselling cards, the provider may review important information for a post-partum mother or infant; may refer him/her to well-child services; discuss and offer cervical screening tests; discuss breast cancer; offer adolescent or male service counselling; discuss women's support and safety; offer post-abortion care as appropriate; discuss STI/HIV transmission and prevention; conduct a risk assessment; discuss dual protection and positive health; and offer the client HIV counselling and testing. The provider offers HIV testing to the client, following national protocols, and encourages the client to disclose her/his STI/HIV status to her/his partner(s), letting the client know both the benefits and risks of the disclosure. Upon completion of the counselling session, the provider gives follow-up instructions on the chosen contraceptive method, the method brochure, and a condom brochure. The provider and client also fix a date for a follow-up visit.

1.6 CLIENT-PROVIDER INTERACTIONS

Principles of Good Client-Provider Interaction

- Ensure the client understands the importance of FP and HTSP
- Treat each client with respect
- Tailor the interaction to the individual client's needs, circumstances, and concerns
- Interact, encourage the client's active participation
- Avoid information overload but focus on advantages and side effects
- Provide the client's preferred method for FP or address the client's primary concern (for other SRH issues)
- Use and provide audio-visual aids

Verbal interactions and sharing of information between the provider and client during each step of a family planning procedure help alleviate client fears and concerns. When a client feels safe and is confident in the provider's skills, the client will be more cooperative. Educating the client about potential side effects and relieving concerns correlate positively with long-term use of temporary family planning methods. Following are the behaviours to be modelled by staff when interacting with the clients:

- Treat the client with respect, exhibiting friendly, calm behaviour and an unrushed manner.
- Treat all clients as equals, without preferential treatment by age, gender, religion, values, caste, languages, economic status or marital status.
- Speak in a language understood by the client or arrange for a translator to help communication.
- Assure confidentiality concerning the client's information.
- Describe how the client can be helpful during the procedure and what to expect before, during and after the procedure.
- Provide the client an opportunity to ask questions and address concerns.
- Assure that client's modesty is maintained.
- Address doubts, fears or misconceptions held by the client.
- Minimize the client's pain and address the client's anxiety.

When the staff members take time to treat clients in a gentle, considerate manner, giving them full information, the counselling process will go smoothly for the staff and clients alike. Brief information on clients is essential before proceeding counselling service like: name of the client, age, sex, marital status, history of abortion, number of previous live birth and surviving child, age of the child and breast feeding, economic status, education, social status (culture), etc.

1.7 HEALTHY TIMING AND SPACING OF PREGNANCY (HTSP)

There is a range of important information and services that should be provided during both the antenatal and post-partum period. New research recommends that providers strengthen their efforts to educate and counsel post-partum women on Healthy Timing and Spacing of Pregnancy (HTSP) and how the use of family planning to space pregnancies can significantly contribute to improved health for both women and their babies.

Post-partum family planning is the initiation and use of family planning methods during the first year after delivery. Ideally post-partum family planning counselling should start during antenatal care.

HTSP focuses on helping programmes and services achieve three key outcomes⁸:

1. Healthy pregnancy spacing of at least 24 months after a live birth.
2. Healthy pregnancy spacing of at least six months after a spontaneous or induced abortion.
3. Healthy timing of the first pregnancy no earlier than age 20⁹ in adolescents.

8 Postpartum Family Planning-Healthy Pregnancy Outcomes, A Training Manual, ESD/USAID, 2009

9 Reproductive Health Clinical Protocol for Medical Officers, FWD, 2076

1.8 NEED BASED (SITUATION-SPECIFIC) COUNSELLING

Situation-specific counselling saves time and makes counselling effective and focused. Clients are of different types like: new or old, satisfied or unsatisfied, decided or undecided. These clients need to be counselled based on needs and situation. For new clients with preference of contraceptive the counselling should focus on client's choice. For new clients with limited knowledge of contraceptives, provide information on all available contraceptives as per the need of the clients. For unsatisfied client, first of all find out the cause of his or her non-satisfaction and then provide the counselling service. For satisfied client, try to assess whether or not the client is using the method as appropriate and do not try to overload with unnecessary information.

Besides these other clients like, VSC clients, post-partum clients, post-abortion care clients, male clients, adolescents, newly married couples, clients nearing menopause and clients with HIV/AIDS should be counselled with following attention:

1.8.1 VSC Clients

Since permanent methods are irreversible, require bodily exposure and are surgical in nature, the following must be addressed:

- In-depth counselling and written informed consent are required.
- Assume that all clients have fears and anxiety and address these concerns in a clear and helpful manner.
- Fully explain each part of the process including screening, pre-operative medications, gowning, operation theatres, post-operative pain, side effects, warning signs, recovery at home and follow-up.
- Maintain the client's dignity and modesty during each stage of the procedure—in counselling, screening, urinating, clipping, changing, waiting, wearing gowns, in operation theatre during procedure and re-dressing.

1.8.2 Post-partum Clients

- Importance of Healthy Timing and Spacing of Pregnancy (HTSP)
- The service provider must ascertain that the client is not limited by physical or emotional factors (sedation, labour, severe pain, trauma) that would compromise the client's ability to make a clear decision.
 - » The effectiveness of the Lactational Amenorrhoea Method (LAM), return of fertility before menses and family planning methods that do not adversely affect breastfeeding is to be explained.

1.8.3 Post-abortion Client

- Importance of Healthy Timing and Spacing of Pregnancy (HTSP)
- Acceptance of contraception must not be a prerequisite for post-abortion care services or treatment of complications.
- Family planning counselling can occur at any time, before or after the procedure or treatment.
- The service provider must ascertain that the client is not limited by physical or emotional factors (sedation, severe pain and trauma) that would compromise the client's ability to make a clear decision. In this case, the client and/or partner should be given condoms, instructions for use, and referral and follow-up information.
- Counselling should include information on the rapid return of fertility (8 days) and potential for pregnancy before menses resume.

- If pregnancy was due to contraceptive failure, counselling must include effectiveness of methods.

1. 8.4 Male Clients and their Engagement

- As with female clients, male counselling should include information on reproduction, sexuality and contraception, and use of flipcharts and anatomic models. Misconceptions about methods should be clarified.
- Condoms should be demonstrated using anatomic model, not just verbally explained or handed out. Instructions for condom use should be readily made available in clinics.
- Couple counselling should be encouraged.
- Role of male in happy life including use of FP by male.

1.8.5 Adolescents

- All methods are safe for adolescents.
- Delaying the first child until a young woman is at least 20 years increases the chance of having a healthy pregnancy and a healthy child.
- Young married adolescents must understand the risk of early pregnancies to health.
- Non-judgemental, unbiased counselling is essential to establish rapport, comfort and trust.
- Confidentiality must be assured and protected.
- Complete information should be available in sexual and reproductive health, with an emphasis on adolescent issues: self-esteem, physical appearance, negotiating unwanted sexual advances and pressure from peers or partners, and handling relationships.
- Make condoms and instructions about use of condoms available to the adolescents in a private setting, free of embarrassment and prevention of STI and HIV.
- Assess the fertility intention.
- Encourage adolescent clients who are sexually active to adopt an FP method of their choice in order to prevent pregnancy.
- Reinforce the health benefits of delaying pregnancy for both mother and child.
- Explain that there are a variety of FP methods that can be used to prevent pregnancy.
- Explain importance of family planning including wealthy and healthy family.
- Sexual minority adolescents have increased sexual and reproductive health risks compared with heterosexual adolescents. Transgender and gender non-conforming adolescents are also likely exposed to elevated risks regardless of their sexual identity. Overall, this population faces sociocultural stigma as well as provider-based barriers to safe and inclusive healthcare.

1.8.6 Young Couple

- Explain the well-planned family size and discuss the healthy timing and spacing of pregnancy and risk of pregnancy at an early age.
- Young married adolescents need time to physically mature so they are prepared for pregnancy and childbirth.
- Delaying the first child until a young woman is at least 20 years increases the chances of having a healthy pregnancy and a healthy child.
- Discuss with young married adolescents to make them understand the risk of early pregnancies to health.
- Discuss about life aspirations including a full educational potential and wealthy and healthy life.
- Discuss about SMART use of FP commodities if relevant.

1.8.7 Women Nearing Menopause (perimenopause)

- Menopause usually occurs between 45-55 years of age. It is important to prevent pregnancy until she is no longer fertile. She should be properly informed about the signs and symptoms of menopause and also about the effects of family planning methods on menopause.
- She can use any method if she has no medical condition that limits its use. Women over 35 years of age are in need of effective contraceptive because pregnancy can carry increased health hazards (mortality and morbidity) for mothers and babies.
- Fertility declines in women over 35 years, resulting in less attention to contraceptive protection but there is still a chance of pregnancy during premenopausal period. Pregnancy, however, is possible so effective contraception is needed.
- Women over age 35 years should be encouraged to stop smoking if they continue to use COCs.
- If the woman desires to limit her family, she should be informed about the long-term methods or permanent method.
- Most women after 35 years may have other reproductive health problems so they need to be advised to do regular check ups of their reproductive organs.

1.8.8 Spouse (husband and wife) of Migrant Worker

- Though they may not have sex regularly, but provider should encourage spouse to talk about family planning when they communicate (through telephone).
- Provider should counsel them to also talk about time (date) of returning home and prepare for family planning (contraception).
- In addition to contraception, provider should also discuss about prevention of infections from STI/HIV (Dual protection methods).

1.8.9 People with Potential Risk of HIV and Living with HIV-Related Risks¹⁰

Family Planning and Potential HIV-Related Risks

- Progestogen-only injectable contraceptives, such as DMPA-IM, DMPA-SC or NET-EN, may increase an HIV-negative woman's likelihood of HIV acquisition through sexual contact.
- Data does not suggest other hormonal contraceptives, such as oral contraceptive pills, are likely to increase a woman's risk of HIV acquisition.
- The MEC continue to place no restriction on use of COCs, combined injectable contraceptives, patches, rings, progestogen-only pills and implants, regardless of HIV status (MEC category 1).
- The MEC states that women at high risk of acquiring HIV can use progestogen-only injectables because the advantages outweigh any possible increased risk (MEC category 2).
- Women considering progestogen-only injectables should be advised about the uncertainty over an increased risk of HIV acquisition and about how they can minimize this risk through the use of male and female condoms, in addition to other HIV prevention methods.
- Women should not be denied the use of progestogen-only injectables due to these concerns if she chooses to use them.
- Women living with HIV can use all forms of hormonal contraceptives without concern related to HIV disease progression.
- There is very limited data regarding potential increased risk of female-to-male HIV transmission with use of hormonal contraceptive.

¹⁰ Strategic Communication Framework for Hormonal Contraceptive Methods and Potential HIV-Related Risks, HC3/USAID, May 2017

- Women using ART should ask their provider if their method of contraception is expected to interact with their regimen of ART.

Women Living with HIV

- Regardless of the contraceptive method planned or used, counsel women living with HIV about: The importance of combining a modern contraceptive method with effective interventions to prevent transmission of HIV, including condoms and ART initiation/adherence
- How some ART regimens may render some hormonal contraceptive methods (COCs and implants) less effective
- ART is unlikely to impact the efficacy of DMPA-IM, DMPA-SC and hormonal IUDs

Dual Method Use

- Strongly encourage women and couples to use condoms in addition to a more effective contraceptive method for dual protection.
- Strongly advise women who select progestogen-only injectable contraceptives to also use condoms (male or female) consistently and correctly.

Couple Communication

- Encourage women to talk to their partners about HIV and contraceptive use.

Client-centred Care

- Respect the fertility intentions of clients.
- All women have the right to choose the number, timing and spacing of their pregnancies, regardless of their HIV status.
- Women living with HIV have the right to get pregnant and have children, or to delay, space or limit pregnancies.

Balancing Decision Making

- The potential increased risk of HIV acquisition while using a progestogen-only injectable method must be balanced against the life-saving benefits of using the most effective contraceptive method according to a client's life situation and needs.
- Women choosing progestogen-only injectables should be assessed and counselled on their personal risk for HIV at the time and what it may be in the future.
- Women should be encouraged to test for HIV if it is assessed that they are at risk.
- When counselling women about vulnerability to HIV and use of hormonal contraceptive, clinical providers should take into consideration:
 - The type of HIV epidemic (i.e. generalized, concentrated, low-level) in that geographic location
 - The woman's HIV status and that of her partner
 - Availability of alternative contraceptive choices

1.8.10 Clients with Disability

The Safe Motherhood and Reproductive Health Rights Act 2018 has a special provision on providing FP service to the disable persons. The Act (Chapter-8, clause 28) says 'while providing services including FP, RH, SM, safe abortion, emergency obstetric and newborn care, morbidity under this Act, such services shall have to be adolescent and disability friendly'.

Healthcare providers should treat people with disabilities in the same way that they should treat people without disabilities: with respect. People with disabilities have the same sexual and reproductive health needs and rights as people without disabilities, but often they are not given information about reproductive and sexual health or adequate care. People with disabilities are more vulnerable to abuse than non-disabled people. They are at increased risk of being infected with HIV and other STIs.

Many have been sterilized against their will, forced to have abortions, or forced into unwanted marriages, and many have experienced gender-based violence.

To counsel clients with disabilities, healthcare providers need to consider their preferences and the nature of their disability. For example, barrier methods may be difficult for some people with a physical disability, and women with a mental disability may have trouble remembering to take a pill each day or dealing with changes in monthly bleeding.

Like all clients, people with disabilities need sexual and reproductive health education to make informed choices.

People with mental disabilities have the same rights as other people to make their own decisions about contraception, including sterilization. They may need special support to do so. For a client with a mental disability who is unable to communicate her or his preferences clearly, someone whom the client trusts should participate and help to make an informed choice that is as consistent as possible with the client's preference. SM and RH Act has mentioned that - 'In the case of a woman who is insane, who is not in a condition to give consent instantly or who has not completed the age of eighteen years, her guardian or curator shall have to give consent'. Especially for the choice of sterilization, healthcare systems should ensure that a process of supported decision-making is available. To care for people with disabilities, programmes should make it known in the community that they serve people with disabilities without discrimination. Facilities should be made physically accessible—for example, with ramps for wheelchairs and large bathrooms with grab bars.

Outreach programmes should make a special effort to identify and reach people in the community who have limited mobility. Print materials should have simple graphics, large print, and *Braille*, if possible, and information should be available in audio format, such as CD or cassette tape, as well as in print. Providers may need especially to demonstrate actions as well as describing them, to speak slowly, and to pause often and check comprehension.

Learning to respect the rights of people with disabilities and to care for them should be part of pre-service training for healthcare providers, and it should be reinforced with in-service training periodically. Moreover, meeting and talking with people with disabilities can give providers valuable information about how to make services more respectful and accessible. Often, the changes needed are easy.

1.8.11 Gender-based Violence

Family planning providers may see many women who have experienced violence. Violence could be physical, sexual, psychological or economic.

Women experiencing violence have special health needs, many of them sexual and reproductive health needs. FP/RH providers are in a good position to identify women who experience violence.

They can help women who have experienced violence in physical as well as psychologic needs.

- Help women feel welcome, safe and free to talk; Ensure confidentiality
- If you suspect violence, ask (explore) about violence
- Offer first line of support (Refer to GBV clinical protocol); Take LIVES tasks – Listen, Inquire (need and concerns), Validate, Enhance safety, Support
- Provide care – treat any injuries and discuss about her best choices for family planning in her situation; if needed provide EC
- Document the abuse/violence experienced by women and discuss about legal treatment

1.8.12 Sexual and Gender Minorities¹¹

Sexual and gender minorities such as **Lesbian, Gay, Bisexual, Transgender and Intersex** (LGBTI) persons remain marginalized from mainstream healthcare. It is important that services work towards clarifying and meeting the needs of these groups of people, especially in the area of sexual and reproductive health.

Many LGBTI clients will not feel comfortable about disclosing their sexual orientation or gender identity for fear of judgement and prejudice. Healthcare providers need to be sensitive to this, and ask questions in a way that does not automatically assume that every client is heterosexual. For example, by asking ‘What form of contraception does your partner use?’ (Rather than using the terms wife/girlfriend or husband/boyfriend). In this way, questions can be asked in a gender-neutral manner and openings can be created to indicate that people can have sexual partners of either gender. Furthermore, asking which pronoun a person prefers (he or she or gender-neutral replacement) can create an environment that is friendly to different gender identities and expressions.

If a client discloses their sexual orientation or gender identity, then healthcare providers need to have a non-judgmental and accepting attitude. It is important to discuss issues relating to lifestyle, sexual health, risk, safe sex, HIV testing, fertility planning and, where appropriate, need for contraception.

A starting point is to ensure that all clients, including LGBTIs, have access to services that foster informed decision-making and encourage healthy relationships based on shared responsibility and mutual respect, without sexual or physical abuse and violence.

LGBTI persons are at equal risk of acquiring or transmitting HIV as their heterosexual and cisgender† counterparts. Discussion about risk and risk reduction, HIV prevention, and HIV testing needs to be part of every consultation. There are certain practices, such as anal sex, which increases the risk of HIV transmission, but these safer sex messages apply as much to LGBTI persons as they do to heterosexual persons. Furthermore, no assumptions should be made as to the sexual practices a person engages in or the type of body a person has (as this may be different from how they present themselves in terms of gender).

Key considerations for contraception and fertility planning for LGBTI persons

Some factors to consider when providing contraceptive and fertility-planning services for LGBTI persons are given below.

¹¹ National Contraception and Fertility Planning Policy and Service Delivery Guidelines; A companion to the National Contraception Clinical Guidelines, Department of Health, Republic of South Africa 2012

Throughout the public health system there needs to be a commitment to understanding the needs of transgender persons and developing strategies to meet those needs.

Oral contraceptives should not be used by transwomen and health workers should discourage this practice.

As recommended in the report *Sexual and Reproductive Health and Rights: Fulfilling our commitments*, specialized transgender clinics should be established, to which transwomen should be referred for assessment and hormonal therapy as indicated. The existing clinics (for example at Steve Biko and Groote Schuur hospitals) need to be replicated elsewhere.

Training of healthcare personnel should include sensitization to the challenges and health needs of LGBTI persons, including the fact that they have similar desires to heterosexual couples, and may have similar aspirations in terms of marrying and having a family

1.8.13 Women Who Engage in Sex Work¹²

Women's reasons for engaging in sex work, as well as their feelings and perceptions about these activities, vary widely. Women who do sex work have the same rights as women who do not, and should be treated with respect and non-judgmental attitudes. Counselors' assumptions about women's sexual activities, partner choices, types of relationships (intimate versus commercial) or power to negotiate within sexual relationships can negatively affect the counseling session. Counselors can be most effective by meeting her needs for health services including that for contraceptives and referrals.

12 Women-Centered Comprehensive Abortion Care Reference Manual, Second Edition IPAS, 2013

CHAPTER 2

CLIENT ASSESSMENT

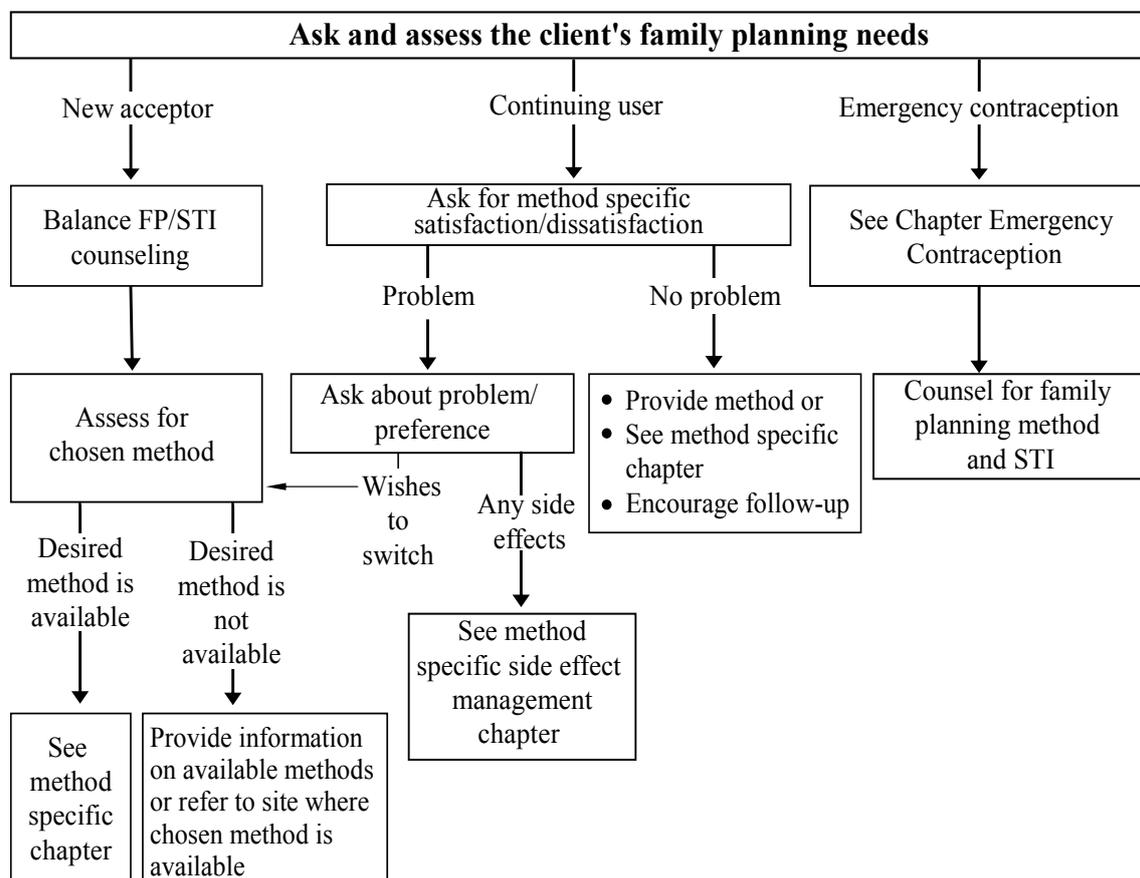
2.1 INTRODUCTION

The objectives of client assessment prior to providing a contraceptive method are to determine the following:

- That the client is not pregnant (Follow pregnancy rule out checklist)
- That the client is eligible for the chosen method; including personal and medical history (follow MEC WHO e.g. MEC Wheel). For most clients, this can be accomplished by asking a few key questions. To enable clients to obtain the best contraceptive method of their choice, client assessment should be limited **only** to those procedures that are essential and mandatory for all clients in **all** settings. (Refer to Table 2-1, and 2-2 Client Screening Checklist, to assess clients considering reversible methods). Clients need can be further assessed by Decision Making Tools developed by WHO and adapted in Nepalese context.

2.2 CLINICAL ASSESSMENT

Figure 2-1: Assessment and Evaluation of Client's Need



2.3 CONTRAINDICATIONS AND PRECAUTIONS FOR PARTICULAR METHODS

In this National Medical Standard, contraindications are listed for any condition or disease that makes the use of a contraceptive strongly inadvisable or unsafe for a client. Precautions are listed for conditions that require extra attention and closer follow-up.

In Nepal the risk of dying from pregnancy-related complication is much greater than the risk of dying from complication or side effect of family planning method. Therefore, precaution of FP methods should not be over emphasised.

In Nepal, the high maternal mortality and morbidity rate associated with pregnancies that are too close, too many and during adolescent must always be considered. Therefore, precautions should not be over emphasized.

2.3.1 Client Screening for Contraceptive Methods

For temporary contraceptive method

The client screening should be based on WHO Medical Eligibility Criteria (MEC). For this MEC Wheel should be used. This wheel contains the medical eligibility criteria for starting use of contraceptive methods, based on Medical Eligibility Criteria for Contraceptive Use, 5th edition (2015), one of WHO's evidence-based guidelines. It guides family planning providers in recommending safe and effective contraception methods for women with medical conditions or medically-relevant characteristics. The wheel includes recommendations on initiating use of nine common types of contraceptive methods:

1. Combined pills, COC (low dose combined oral contraceptives, with $\leq 35 \mu\text{g}$ ethinyl estradiol)
2. Progestogen-only pills, POP
3. Progestogen-only injectables, DMPA (IM, SC)/NET-EN (depot medroxyprogesterone acetate intramuscular or subcutaneous or norethisterone enantate intramuscular)
4. Progestogen-only implants, LNG/ETG (levonorgestrel or etonogestrel)
5. Copper-bearing intrauterine device, Cu-IUCD

The following table describes categories of temporary methods.

Table 2-1: Categories for Temporary Methods

Category	With Clinical Judgement	With Limited Clinical Judgement
1	Use method in any circumstances	Yes (Use the method)
2	Generally, use method	
3	Use of method not usually recommended unless other more appropriate methods are not available or not acceptable	No (Do not use the method)
4	Method not to be used	

Figure 2-2: Medical Eligibility Criteria Wheel for Contraceptive Use

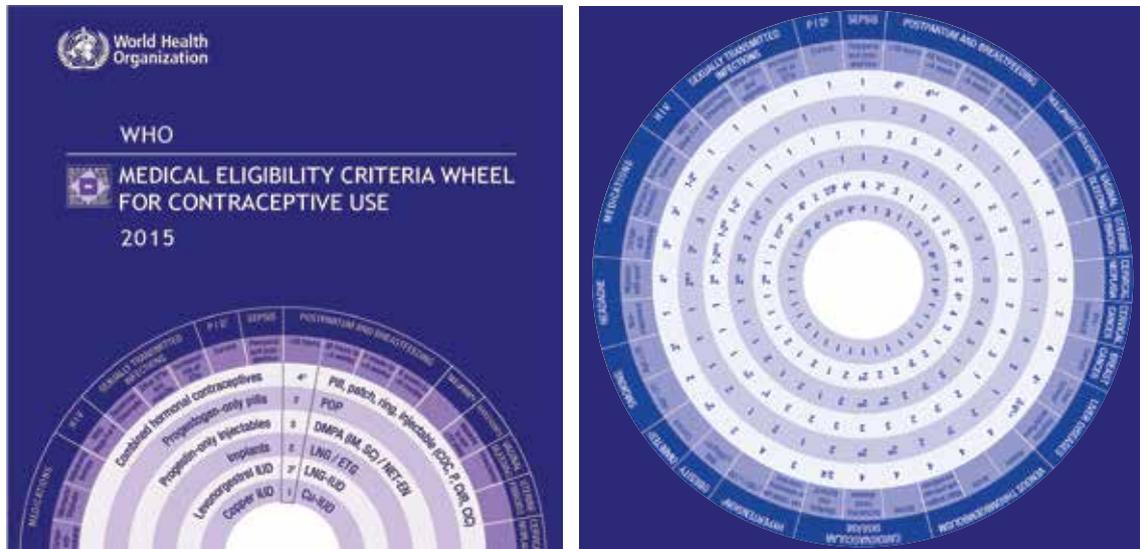


Table 2-2 Categories of permanent methods (female sterilization and vasectomy)

Accept (A)	There is no medical reason to deny the method to a person with this condition or in this circumstance.
Caution (C)	The method is normally provided in a routine setting, but with extra preparation and precautions.
Delay (D)	Use of the method should be delayed until the condition is evaluated and/or corrected. Alternative, temporary methods of contraception should be provided.
Special (S)	The procedure should be undertaken in a setting with an experienced surgeon and staff, equipment needed to provide general anaesthesia, and other backup medical support. The capacity to decide on the most appropriate procedure and anaesthesia support also is needed. Alternative, temporary methods of contraception should be provided if referral is required or there is otherwise any delay.

2.3.2 How to be Reasonably Sure that the Client is NOT Pregnant

All female clients should be screened for pregnancy before provision of any family planning method. If a woman who is unknowingly pregnant is given a family planning method, it is likely that people in her family and community will believe that the method she used is not effective, and false rumours will spread about that method.

You can be reasonably sure the client is not pregnant after using the following pregnancy checklist:

Figure 2-3: Pregnancy Checklist

Ask the client questions 1-6. As soon as the client answers “yes” to any question, stop and follow the instructions below.

NO		YES
	1 Did your last monthly bleeding start within the past 7 days?*	
	2 Have you abstained from sexual intercourse since your last monthly bleeding, delivery, abortion, or miscarriage?	
	3 Have you been using a reliable contraceptive method consistently and correctly since your last monthly bleeding, delivery, abortion, or miscarriage?	
	4 Have you had a baby in the last 4 weeks?	
	5 Did you have a baby less than 6 months ago, are you fully or nearly-fully breastfeeding, and have you had no monthly bleeding since then?	
	6 Have you had a miscarriage or abortion in the last 7 days?*	

* If the client is planning to use a copper-bearing IUCD, the 7-day window is expanded to 12 days.

If the client answered NO to *all of the questions*, pregnancy cannot be ruled out using the checklist.
Rule out pregnancy by other means.

If the client answered YES to *at least one of the questions*, you can be reasonably sure she is not pregnant.

Source: WHO. 2018. Family Planning: A Global Handbook for Providers, 2018 Edition

Physical exam is seldom necessary, except to rule out pregnancy of greater than 6–8 weeks gestation (measured from the last menstrual period).

Pregnancy testing is unnecessary except in cases where:

- It is difficult to confirm pregnancy (i.e., 6 weeks or less from the last menstrual period (LMP); or
- The results of the pelvic examination are equivocal (e.g., the client is overweight, making sizing the uterus difficult).

In these situations, a sensitive urine pregnancy test (i.e., detects less than 50 mIU/ml of HCG) may be helpful, if readily available and affordable. If pregnancy testing is not available, counsel the client to use condom or natural contraceptive method or abstain from intercourse until her menses occurs or pregnancy is confirmed.

2.4 CLIENT ASSESSMENT REQUIREMENTS

Importance of Selected Procedures for Providing Family Planning Methods

The table 2-3 shows how important various examinations and tests are when providing specific family planning methods.

Most methods do not require any of these exams or tests (Class C). However, these exams and tests may be useful as part of a general health check-up or for the diagnosis or monitoring of other health conditions.

Key to the chart:

Class A: Essential and mandatory in all circumstances for safe and effective use of the contraceptive method. A pelvic or genital examination is essential for IUCD insertion, most diaphragms, female sterilization, and vasectomy. STI risk assessment also is essential before IUCD insertion. Blood pressure screening is essential before female sterilization.

Class B: Contributes substantially to safe and effective use. If the test or examination cannot be done, however, the risk of not performing it should be weighed against the benefits of making the contraceptive method available. Laboratory screening for STIs and a haemoglobin test would contribute to the safety of IUCD insertion. A haemoglobin test also would contribute to the safety of female sterilization.

Class C: Does not contribute substantially to safe and effective use of the contraceptive method. These tests and exams are not required or helpful for hormonal contraceptive methods, male or female condoms, or spermicides.

These classifications apply to people who are presumed to be healthy. For a person with a known medical condition or other special condition, refer to the Medical Eligibility Criteria for Contraceptive Use.

For information on ruling out pregnancy. Ruling out pregnancy is essential for IUCD insertion and helpful for deciding when to start hormonal methods (see table 2-3).

Table 2-3: Selected Procedures for Providing Family Planning Methods

Specific Situation	Combined oral contraceptives*	Monthly Injectable	Progestin-only pills	Progestin-only injectable	Implants	Cu- and LNG-IUCDs	Male and female condoms	Female sterilization	Vasectomy
Breast examination by provider	C	C	C	C	C	C	C	C	NA
Pelvic/genital examination	C	C	C	C	C	A	C	A	A
Cervical cancer screening	C	C	C	C	C	C	C	C	NA
Routine laboratory tests	C	C	C	C	C	C	C	C	C
Haemoglobin test	C	C	C	C	C	B	C	B	C
STI risk assessment: medical history and physical examination	C	C	C	C	C	A**	C	C	C
STI/HIV screening: laboratory tests	C	C	C	C	C	B**	C	C	C
Blood pressure screening	‡	‡	‡	‡	‡	C	C	A	C§

Note: No tests or examinations are needed before using fertility awareness-based methods, lactational amenorrhea method, or emergency contraceptive pills.

NA=Not applicable

* Includes patch and combined vaginal ring.

** If a woman has a very high individual likelihood of exposure to STIs, she generally should not have an IUCD inserted unless other methods are not available or not acceptable. If she has current purulent cervicitis, gonorrhoea, or chlamydia, she should not have an IUCD inserted until these conditions are resolved and she is otherwise medically eligible.

† Women at high risk of HIV infection should not use spermicides. Using spermicides alone or diaphragms or cervical caps with spermicides is not usually recommended for women with HIV infection unless other, more appropriate methods are not available or acceptable.

‡ Desirable, but in settings where the risks of pregnancy are high, and hormonal methods are among the few methods widely available, women should not be denied use of hormonal methods solely because their blood pressure cannot be measured.

§ For procedures performed using only local anaesthesia.

CHAPTER 3

INFECTION PREVENTION

3.1 INTRODUCTION

Preventing harm to family planning clients, health workers and visitors due to infection in health care facilities is fundamental to achieve quality care, patient safety, health security and the reduction of Healthcare-Associated Infections (HAIs) and antimicrobial resistance. Receiving safe health care is a client's right and should also be the duty and pride of all those working in the health care sector. While providing family planning services, clients and health care workers need to be safe and protected at all times, no matter where and irrespective of the context.

Surgical Site Infections (SSIs) are potential complications associated with any type of surgical procedure. Although SSIs are among the most preventable HAIs, they still represent a significant burden in terms of patient morbidity and mortality and additional costs to health systems and service payers worldwide. For these reasons, the prevention of HAI has received considerable attention from surgeons and infection control professionals, health care authorities, the media and the public.

Uses of standard Infection Prevention and Control (IPC) procedures can minimize HAIs. IPC practices are simple, effective, and inexpensive. The aim of the IPC is to minimize the transmission of infections to clients, service providers, including clinic helpers who handle contaminated instruments and wastes and community people.

Risk of HIV infection in the clinic

Health care providers may be exposed to HIV through needle pricks, contact with mucous membranes, or broken skin, but the risk of infection is low:

- The average risk of HIV infection after a needle-prick exposure to HIV-infected blood is 3 infections per 1,000 needle pricks.
- The risk after exposure of the eye, nose, or mouth to HIV-infected blood is estimated to be about 1 infection per 1,000 exposures.

Following standard precautions is the best way that providers can avoid workplace exposure to HIV and other fluid-borne infections

Globally, hundreds of millions of people are affected every year by avoidable HAIs. The determinants of HAIs are influenced by a complex combination of gaps in policies, infrastructure, organization and knowledge, defects in health-care workers' behaviour, and patient-related factors related to IPC. Through knowledge, best practices and infrastructure improvement, IPC aims to prevent harm due to HAI to patients and health workers. (Source: WHO, 2016)

3.2 STANDARD PRECAUTION

Standard Precautions are a set of infection control practices used for every patient encounter to reduce the risk of transmission of blood-borne and other pathogens from both recognized and unrecognized sources. They are the basic level of infection control practices to be used, at a minimum, in preventing the spread of infectious agents to all individuals in the health care facility (CDC, WHO).

Standard Precautions include:

- Hand hygiene.
- Use of personal protective equipment.
- Respiratory hygiene/cough etiquette.
- Safe injection practices/Sharps safety.
- Sterile instruments and devices.
- Clean and disinfected environmental surfaces.

3.2.1 Hand Hygiene

The hands of healthcare workers are the most frequent transmission route for HAIs. Hand hygiene, the most simple and important measure to prevent transmission of infection and important responsibility of all healthcare personnel. Thorough hand washing with adequate quantities of water and soap removes more than 90% of the transient (i.e. superficial) flora, including all or most contaminants. An antimicrobial soap will further reduce the transient flora, but only if used for several minutes. Despite evidence that hand hygiene prevents transmission of infections, compliance with hand hygiene recommendations during patient care continues to present ongoing challenges in all settings.

The goal of hand hygiene is to remove soil, dirt, and debris and reduce both transient and resident flora. Hand hygiene can be performed using alcohol-based hand rub (ABHR) or by washing hands with water and plain or antimicrobial soap (bar or liquid) that contains an antiseptic agent such as chlorhexidine, iodophors, or triclosan.

Traditionally, hand washing with soap and water has been the primary method of hand hygiene; however, ABHR has been shown to be more effective for standard hand hygiene than plain or antimicrobial soaps.

Hand Hygiene Opportunities

The World Health Organization has five recommended points in time when hand hygiene should occur in order to prevent transmission of HAIs. These recommendations are called the “**My 5 Moments for Hand Hygiene**” and focus on the following times:

1. Before making contact with a patient
2. Before performing a clean/aseptic task, including touching invasive devices
3. After performing a task involving the risk of exposure to a body fluid, including touching invasive devices
4. After patient contact
5. After touching equipment in the patient’s surrounding areas

The “5 Moments” are numbered according to health care work-flow in an attempt to ease recall for Health Care Workers HCWs (see Figure 3-1 below).

Figure 3-1: WHO's Five Recommended Moments for Hand Hygiene



Reprinted from: The "My 5 Moments for Hand Hygiene," © World Health Organization (2009): <http://www.who.int/gpsc/5may/background/5moments/en/>. Accessed June 28, 2016.

Items required for hand washing

- Soap
- Soap box with hole
- Clean running water
- Jug
- Basin to collect water
- Personal towel—clean and dry

Hand Hygiene Methods

a) Hand Washing with Soap and Water

The purpose of routine hand washing in health care is to remove dirt and organic material, as well as microbial contaminants, from the hands. Clean water must be used to prevent microorganisms in the water from contaminating the hands. However, water alone is not effective at removing substances containing fats and oils, which are often present on soiled hands. Proper hand washing also requires soap, which is rubbed on all hand surfaces, followed by thorough rinsing and drying.

The cleansing activity of hand washing is achieved by both friction and the detergent properties of the soap. Plain soap has minimal antimicrobial properties, but assists with the mechanical removal of debris and loosely adherent microbes, while the mechanical action removes some bacteria from hands. The entire hand washing procedure, if completed properly, as described step by step in the Figure below, should take 40–60 seconds. (CDC 2002; WHO 2009)

TIME REQUIRED FOR DIFFERENT TYPES OF HAND HYGIENE

Hand hygiene using soap and water: 40-60 seconds

Hand hygiene using ABHR: 20-30 seconds

Surgical hand scrub soap and water: 2-5 minutes, ABHR-2-3 minutes

Figure 3-2: Steps of hand washing for non-surgical procedure

Hand washing with soap and water is recommended (rather than using ABHR) in the following situations:

- If hands are visibly soiled or contaminated with blood or body fluids
- After using the toilet
- Before eating
- To remove the buildup of emollients (e.g., glycerol) on hands after repeated use of ABHR

Avoiding contamination of hands during hand washing

Since microorganisms grow and multiply in moisture and in standing water, the following are recommended to prevent contamination of hands during hand washing:

- Avoid bar soaps when possible because they can become contaminated, leading to colonization of microorganisms on hands. If bar soap is used, provide small bars and use soap racks that drain the water after use.
- Do not add liquid soap to a partially empty liquid soap dispenser. This is known as “topping off.” The practice of topping off dispensers may lead to bacterial contamination of the soap. Using refill packets avoids this problem but if they are not available, dispensers should be thoroughly cleaned and dried before refilling.
- Filter and/or treat water if a health care facility’s water is suspected of being contaminated; this will make the water microbiologically safer.
- Use running water for hand hygiene. In settings where no running water is available, water “flowing” from a pre-filled container with a tap is preferable to still-standing water in a basin. Use a container with a tap that can be turned off preferably with the back of the elbow (when hands are lathered) and turned on again with the back of the elbow for rinsing. As a last resort, use a bucket with a lid or a pitcher and a mug to draw water from the bucket, with the help of an assistant, if available.
- Avoid dipping hands into basins of standing water. Even with the addition of an antiseptic agent (e.g., Dettol or Savlon), microorganisms can survive and multiply in these solutions.
- If a drain is not available where hands are washed, collect water used from hand hygiene in a basin and discard it in a drain or in a latrine.
- Dry hands properly because wet hands can more readily acquire and spread microorganisms. Dry hands thoroughly with a method that does not re-contaminate the hands. Paper towels or single-use clean cloths/towels are an option. Make sure that towels are not used multiple times or by multiple individuals because shared towels quickly become contaminated.

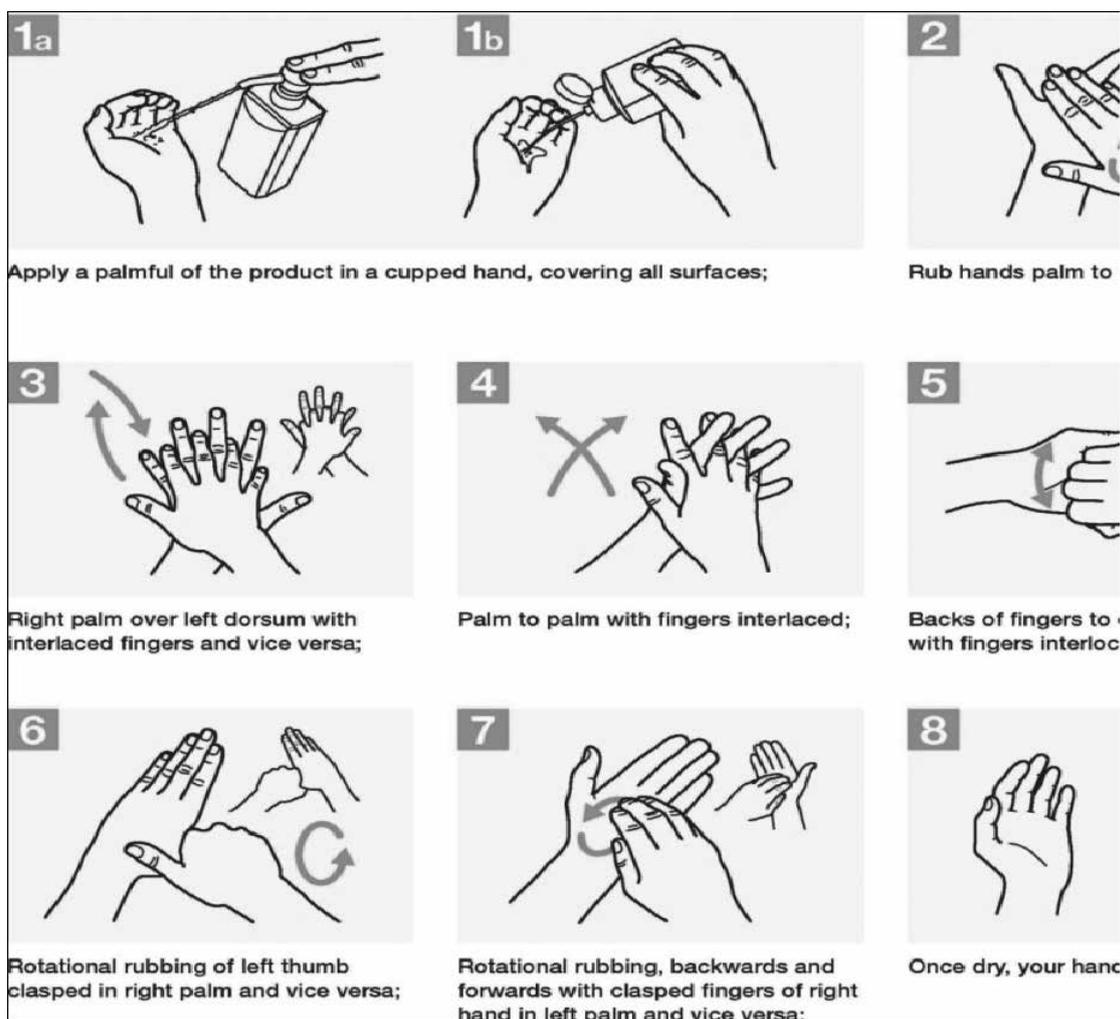
b) Alcohol-Based Hand Rub (ABHR)

The antimicrobial activity of alcohol results from its ability to denature proteins (i.e., the ability to dissolve some microbe components) and kill microbes. Alcohol solutions containing 60–80% alcohol are most effective, with higher concentrations being less effective. This paradox results from the fact that proteins are not denatured easily in the absence of water; as a result, microorganisms are not killed as easily with higher alcohol-based solutions (> 80% alcohol).

The use of an ABHR is more effective in killing transient and resident flora than hand washing with antimicrobial agents or plain soap and water. It also has persistent (long-lasting) activity. ABHR is quick and convenient to use and can easily be made available at the point of care. ABHR usually contains a small amount of an emollient (e.g., glycerol, propylene glycol, or sorbitol) that protects and softens skin. ABHR should be used at any of the “5 Moments” described earlier in this chapter, unless hands are visibly soiled.

To be effective, approximately 3–5 mL (i.e., 1 teaspoon) of ABHR should be used. The ideal volume of ABHR to apply to the hands varies according to different formulations of the product and hand size (refer to manufacturer’s instructions for use). ABHR should be used, following the steps shown in the Figure below, for approximately 20–30 seconds or until the solution has fully dried. Since ABHR does not remove soil or organic matter, if hands are visibly soiled or contaminated with blood or body fluids, hand wash with soap and water. To reduce the buildup of emollients on hands after repeated use of ABHR, washing hands with soap and water after every 5–10 applications of ABHR is recommended.

Figure 3-3: Recommendation on How to Perform Hand Hygiene with ABHR



Source: “How to handrub,” © World Health Organization (2009).
http://www.who.int/gpsc/5may/How_To_HandRub_Poster.pdf. Accessed May 6, 2016.

c) Surgical Hand Scrub

The purpose of surgical hand scrub is to mechanically remove soil, debris, and transient organisms prior to surgery and to reduce resident flora for the duration of surgery (residual effect). It is performed to prevent wound contamination by microorganisms from the hands and arms of the surgical team. This is especially important because sterile gloves alone do not prevent wound contamination due to micro tears or potential punctures in the gloves.

Various protocols are available for preoperative hand scrubbing. Alcohol-based surgical hand rub is thought to be at least as effective as traditional water-based surgical scrubs. Use of alcohol-based surgical hand scrub, however, does require that team members have thoroughly washed

their hands prior to using it for the first time each day.

Recommendations:

- Performed surgical hand preparation before putting on sterile gloves.
- Use either an antimicrobial soap or ABHR, preferably with a product ensuring sustained activity e.g., chlorhexidine.
- Perform surgical hand preparation using an ABHR if the quality of water is not assured in the OT area.
- Keep nails short and pay attention to them when washing your hands. Most microbes on hands come from beneath the fingernails (subungual).
- Do not wear artificial nails or chipped or cracked nail polish.
- Remove all jewelry (rings, watches, bracelets) before entering the OT area.
- Wash hands and arms with a non-medicated soap before entering the OT area.

Surgical Hand Scrub Using Antimicrobial Soap:

- Do not use a brush for surgical hand scrub.
- Surgical scrub of 2–5 minutes is adequate; long scrub times are not necessary.

Surgical Hand Scrub Using ABHR:

- When using an ABHR product, follow the manufacturer's instructions for application times. Apply the product only to dry hands.
- When using an ABHR, use a sufficient amount to keep hands and forearms wet with the hand rub throughout the surgical hand-preparation procedure.
- Do not use a combination of surgical hand scrub and surgical hand rub with alcohol-based products at the same time.

Steps of Surgical Hand Scrub Using Medicated Soap:

Clean subungual areas (under the fingernails) with a nail cleaner to remove any deposits before the first scrub of the day.

- STEP 1: Start timing. For 2 minutes, scrub each side of each finger, between the fingers, and the back and front of the hands.
- STEP 2: Proceed to scrub the arms, keeping the hands higher than the arm at all times. This helps to avoid recontamination of the hands by water from the elbows. It also prevents bacteria-laden soap and water from contaminating the hands.
- STEP 3: For 1 minute, wash each side of the arms from the wrist to the elbow.
- STEP 4: Repeat the process on the other hand and arm. Keep hands above elbows at all times. If the hand touches anything at any time, the scrub time must be lengthened by another 1 minute for the same area that has been contaminated.
- STEP 5: Rinse hands and arms by passing them through the water flow in one direction only, from fingertips to elbow. Do not move the arm back and forth through the water.
- STEP 6: Proceed to the OT without contaminating hands or arms and holding hands above elbows.
- STEP 7: At all times during the scrub procedure, care should be taken not to splash water onto surgical attire.
- STEP 8: Once in the OT, hands and arms should be dried using a sterile towel and aseptic technique before putting on gown and gloves.

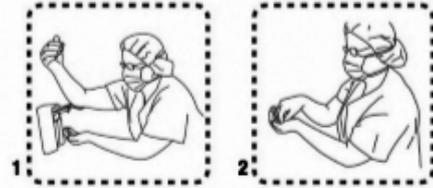
(Sources: Widmer et al. 2010; WHO 2009a; WHO 2009b.)

Steps for Performing Surgical Hand Preparation Using ABHR

Figure 3-4: Surgical Hand Rubbing Techniques

Surgical Handrubbing Technique

- Handwash with soap and water on arrival to OR, after having donned theatre clothing (cap/hat/bonnet and mask).
- Use an alcohol-based handrub (ABHR) product for surgical hand preparation, by carefully following the technique illustrated in Images 1 to 17, before every surgical procedure.
- If any residual talc or biological fluids are present when gloves are removed following the operation, handwash with soap and water.



1 Put approximately 5ml (3 doses) of ABHR in the palm of your left hand, using the elbow of your other arm to operate the dispenser.

2 Dip the fingertips of your right hand in the handrub to decontaminate under the nails (5 seconds).



Images 3-7: Smear the handrub on the right forearm up to the elbow. Ensure that the whole skin area is covered by using circular movements around the forearm until the handrub has fully evaporated (10-15 seconds)



Images 8-10: Now repeat steps 1-7 for the left hand and forearm.

11 Put approximately 5ml (3 doses) of ABHR in the palm of your left hand as illustrated, to run both hand at the same time up to the wrists, following all steps in images 12-17 (20-30 seconds).

12 Cover the whole surface of the hands up to the wrist with ABHR, Rubbing palm against palm with a rotating movement.



13 Rub the back of the left hand including the wrist moving the right palm back and forth, and vice-versa.

14 Rub palm against palm back and forth with fingers interlinked.

15 Rub the back of the fingers by holding them in the palm of the other hand with a sideways back and forth movement.

16 Rub the thumb of the left hand by rotating it in the clasped palm of the right hand and vice versa.

17 When the hands are dry, sterile surgical clothing and gloves can be done

Repeat this sequence (average 60 sec) the number of times that adds up to the total duration recommended by the ABHR manufacturer's Instructions. This could be two or even three times.

Source: WHO. n.d. Surgical Handrubbing Technique.

<http://www.who.int/infection-prevention/countries/surgical/NewSurgicalA3.pdf>

It is the best practice for providers to wash their hands between each client contact. However, in high volume settings (high volume is defined as five or more clients waiting for family planning procedures), this may be difficult to practice. In such situations the following are the minimum standards:

Minimum hand washing requirement for VSC and other family planning services:

Routine Setting	High Volume Setting	
		Minilap, Vasectomy, Implants and IUCD
After every case	After every 5 cases or hourly	After every 10 cases or hourly

Note: Gloves must be changed between cases no matter which of the above procedures is followed.

3.2.2 Use of Personal Protective Equipment (PPE)

Protective barriers are recommended to guard Health Care Workers (HCWs) from a number of serious hazards present in the health care environment. Hazards to HCWs include blood-borne pathogens and other microorganisms that may be transmitted from patients and the health care environment, as well as numerous drugs, chemicals, and equipment used in the health care setting. Various types of PPE are used to protect mucous membranes, airways, skin, and clothing of HCWs. In addition, PPE also helps protect patients from infectious or potentially infectious agents from HCWs, other patients, or the health care environment. PPE usually refers to gloves (e.g., non-sterile, sterile, and utility gloves), masks/respirators, protective eyewear (e.g., face shields, goggles, or safety glasses), gowns, aprons, and other items (e.g., caps, closed-toe shoes, and shoe covers).

Note: In health care facilities with limited resources, there should be a priority to provide adequate PPE to the HCWs to implement, at a minimum, Standard Precautions.

a) Use of gloves:

Gloves have been shown to protect the hands of HCWs from contamination with infectious materials and protect patients from microorganisms on HCWs' hands. Gloves are the most important physical barrier for preventing the spread of infection. Nevertheless, wearing even the best-quality gloves does not provide complete protection against hand contamination. Bacterial flora from colonizing patients have been recovered from the hands of up to 30% of HCWs who wear gloves during patient contact. Hand hygiene, before and after patient contact, is still necessary.

There are three types of gloves for use in health care facilities:

- **Sterile gloves** are used when performing invasive medical or surgical procedures when sterility is required.
- **Non-sterile gloves** are used by HCWs to protect themselves from blood and body fluids when performing routine patient care.
- **Utility or heavy-duty household gloves** are worn for processing instruments, cleaning equipment and other items, environmental cleaning, handling soiled textile items, and handling contaminated waste to conserve other gloves for patient care.

The most appropriate type of gloves to be worn in a particular circumstance should be carefully selected. Reprocessing and reusing gloves, except for heavy-duty utility gloves, should not be done.

It is important to remember that gloves:

- Are themselves potential sources of transmission between patients if not changed after contact with contaminated items (such as soiled dressings) and between patient contacts; therefore, hand hygiene is recommended before putting on gloves and after removing them.
- Are not manufactured to be cleaned with soap and water or alcohol-based hand rub (ABHR) between patients because cleansing products (e.g., soap, ABHR) may damage the gloves and impact how effectively they can protect an individual's hands. They are single-use items and are not manufactured to be reprocessed or reused.
- May have small, hidden defects (i.e., even the best-quality latex sterile surgical gloves may have small holes in them) and can tear during use, contaminating hands during use and removal.

Some dos and don'ts about gloves

- Do wear the correct size gloves, particularly surgical gloves. A poorly fitting glove can limit the ability to perform the task and may be damaged (i.e., torn or cut) more easily. Do change sterile surgical gloves periodically during long procedures because the protective effect of sterile gloves decreases with time and unapparent tears may occur. The Association of peri Operative Registered Nurses (AORN) recommends changing sterile gloves every 90–150 minutes. (AORN 2013)
- Do change gloves when a perforation or defect is noticed or when there is a suspected perforation from a needle, suture, bone, or other object.
- Do keep natural fingernails short (i.e., less than 0.5 cm, or 1/5 of an inch, long) to reduce the risk of tears.
- Do pull gloves up over the cuffs of the gown (if worn) to protect the wrists.
- Do not use oil-based or perfumed hand lotions or creams because these will damage latex rubber gloves. In addition, fragrant lotions can irritate the skin under gloves.
- Do not store gloves in areas where there are extreme changes in temperatures (e.g., in the sun or near a heater, air conditioner, ultraviolet light, fluorescent light, or X-ray machine). These conditions may damage the gloves (i.e., cause breakdown of their material), thus reducing their effectiveness as a protective barrier.

b) Using other surgical attire

Other surgical attire such as caps, masks, aprons, boots, eyeglasses, and gowns help reduce the risk of post-procedure infections in clients.

Gowns:

Gowns should fully cover the torso of the HCW, fit comfortably over the body, and have long sleeves that fit snugly at the wrists. Surgical gowns are sterile and preferably fluid-resistant, with sleeves that either taper gently toward the wrists or end with elastic or ties around the wrists. Surgical gowns are used during surgery or procedures to protect patients and HCWs from blood and other body fluids (e.g., amniotic fluid). When the surgical gowns are put on, the cuffs of sterile surgical gloves should completely cover the end of the sleeves of the gowns.

Masks:

There are many different types of masks used to cover the mouth and nose. Masks made from cotton or paper are comfortable but are not fluid-resistant (do not protect from splashes) and are not an effective filter to prevent inhalation of microorganisms transmitted via droplet nuclei ($\leq 5 \mu\text{m}$). Masks made from synthetic materials provide protection from large droplets ($> 5 \mu\text{m}$) spread

by coughs or sneezes. They may be more difficult to breathe through than cotton or paper masks. The use of masks during patient care is part of Standard Precautions when there is a potential for splashes or droplet transmission and is part of Droplet Precautions.

Protective Eyewear:

Protective eyewear protects eye from splashes, sprays, and respiratory droplets coming from multiple angles. Eye protection should be comfortable, allow for sufficient peripheral vision (i.e., the area that is visible outside the central area of focus), and must be adjustable to ensure a secure fit. Compared to older styles of goggles, newer styles may provide better indirect airflow properties to reduce fogging, provide better peripheral vision, and offer more size options for fitting goggles to different HCWs.

Head Covering/Caps:

Head covers or caps are used to keep the hair and scalp covered so that flakes of skin and hair are not shed into the sterile field. Head covers are most commonly used as part of surgical attire in surgical and procedure areas. When used, head covers or caps should be large enough to cover the entire scalp and hair.

Footwear:

Proper footwear reduces the risk of exposure to blood or other potentially infectious materials, sharps injuries, and slipping or falling. All footwear should have closed toes, low heels, and non-skid soles. Rubber boots or leather shoes provide the best protection. They must be kept clean. Open-toe slippers and flip flops are not appropriate footwear in health care settings.

Sequence for Putting on PPE for Standard Precautions

1. Put on protective boots or shoe covers (if needed).
2. Perform hand hygiene.
3. Put on a gown.
4. Put on a procedure mask.
5. Put on goggles or a face shield.
6. Lastly, put on gloves.

Use of Cell Phone

Use of cell phones has increased incidence of operation theatre infections, so use of cell phones in operation theatre should be prohibited.

Surgical attire required for family planning procedures

Family Planning Procedure	Gloves	Cap/Mask	Gowns
IUCD	Yes	No	No
Implants	Yes	No	No
NSV	Yes	Yes	No
Minilap	Yes	Yes	Yes
Laparoscopy	Yes	Yes	Yes

3.2.3. Respiratory Hygiene/Cough Etiquette:

Respiratory hygiene/cough etiquette infection prevention measures are designed to limit the transmission of respiratory pathogens spread by droplet or airborne routes. The strategies target primarily patients and individuals accompanying patients to the health care setting who might

have undiagnosed transmissible respiratory infections, but also apply to anyone with signs of illness including cough, congestion, runny nose, or increased production of respiratory secretions. In family planning clinics, this is not much applied. So, detail of this topic is not the scope of this chapter.

3.2.4 Safe Injection Practices/Sharps Safety:

Injection safety, or safe injection practices, is a set of measures taken to perform injections in an optimally safe manner for patients, healthcare personnel, and others. A safe injection does not harm the recipient, does not expose the provider to any avoidable risks, and does not result in waste that is dangerous for the community (e.g., through inappropriate disposal of injection equipment). Injection safety includes practices intended to prevent transmission of infectious diseases between one patient and another, or between a patient and healthcare provider, and also to prevent harms such as needle stick injuries. Safe injection practices, which are a component of Standard Precautions, include using a new, single-use disposable syringe and needle for each patient, using single-use vials for only one patient, and managing multi-dose vials correctly. Eliminating unnecessary injections and using safe injection practices are the best ways to protect patients and staff from the risks.

- The reduction of accidental exposure to potentially infected blood and body fluids for patients and HCWs requires 100% compliance with safe injection practices. A safe injection is one that does not harm the recipient, does not expose the provider to any avoidable risks, and does not result in waste that is dangerous for the community.

The components of safe injection practices include the following:

- Adequate supply of single-use disposable injection devices (needles and syringes).
- Safe handling of vials containing medication (single-use and multi-dose vials).
- Safe preparation of parenteral medication.
- Appropriate administration of injections.
- Safe disposal of used needles and syringes.

Safe Handling of Vials Containing Medication (Single-Use and Multi-Dose Vials):

- When using a sterile, single-use device (i.e., a syringe and hypodermic needle that are not separated or manipulated unless necessary):
- Use a new device for every patient, including for withdrawing medication. This practice is considered a very basic IPC.
- Inspect the packaging of the device to ensure that the protective barrier has not been breached.
- Discard the device if the package has been punctured, torn, or damaged by exposure to moisture, or if the expiry date has passed.

When giving medication:

- ALWAYS follow the one needle, one syringe, one injection rule.
- DO NOT use a single-loaded syringe to administer medication to several patients even if you change the needle every time between patients. See Unsafe Injection Practices and Disease Transmission in this chapter. (Always follow the one needle, one syringe, one injection rule.)
- DO NOT use the same mixing syringe and needle to reconstitute several vials.
- DO NOT combine leftover medications for later use.
- DO NOT use single-use vials for multiple patients, if at all possible.

Procedure for vials with a rubber septum:

- Wipe the access rubber septum with 70% alcohol (isopropyl alcohol or ethanol) with a swab or cotton-wool ball and allow it to dry before piercing the vial or inserting a device into the bottle. Use a new, single-use, disposable, sterile syringe and needle for each insertion into a vial.
- Never leave a needle in a multi-dose vial.
- Once the loaded syringe and needle have been withdrawn from a multi-dose vial, administer the injection as soon as possible.

Safe Disposal of Used Needles and Syringes

Use of best practices can help to prevent sharps injuries to HCWs.

Practical guidance on prevention of sharps injuries

- Do not bend, break, manipulate, or manually remove needles before disposal.
- Avoid recapping needles, but if a needle must be recapped, use a single-handed scoop technique.
- Discard used sharps and glass ampoules into a leak- and puncture-resistant sharps container immediately after use in the location where they were used.
- Place the sharps container within arm's reach to allow for easy disposal of sharps.
- Seal and replace the sharps container when it is three-quarters full. Be sure that no sharp items are sticking out of the container.

Practical guidance on sharps disposal

To ensure that sharps are dealt with safely:

- Place needles and syringes into containers specifically designed for sharps disposal.
- After closing and sealing sharps containers (when three-quarters full), never open, empty, or reuse them.

Management of injuries from needles and other sharps

In case of injury with a used needle or other sharp or if blood/body fluids are splashed into the mouth, eyes or onto broken skin, carry out the following procedure:

Needle pricks, cuts, or scratches (that penetrate the skin)

- Wash thoroughly with soap and water.
- Cover with a waterproof sterile dressing.
- If doubtful repeat blood test after 3 months.

Splashes to mouth or eyes

Rinse thoroughly with plenty of running water.

Most experts agree that the larger the volume of blood involved in the exposure, the greater the risk of infection. Therefore, first aid must begin as soon as possible after the exposure and aim to flush away as much inoculation as possible.

For All Exposures That Penetrate Skin

If you are sure that the patient is positive for blood-borne infections, you can reduce the risk of transmission by using post-exposure prophylaxis measures. To receive such preventive measures, please consult with the infectious disease specialist familiar with post-exposure prophylaxis.

Using antiseptic solutions

Antisepsis is the process of reducing the number of microorganisms on skin, mucous membranes, or other body tissue by applying an antimicrobial (antiseptic) agent.

Antisepsis plays an important role in preventing postoperative wound infections by limiting the type and number of microorganisms transferred into the wound during surgery. Preoperative surgical antisepsis includes the use of antiseptics in surgical hand scrubs performed by the scrub team, and the use of antiseptics on the patient's skin surrounding the surgical site.

Indications to use antiseptics

- Surgical hand scrub
- Skin, cervical and vaginal preparation before a clinical procedure
- Hand washing in high-risk situations, such as before invasive procedures (e.g., insertions of central venous catheters or tubes) or before contact with clients at high risk of infections (e.g., newborns or immune-suppressed clients)

Notes on preparing skin and shaving hair at operative site: While preparing skin for surgical procedure, do not shave hair at the operative site. Shaving increases the risk of infection as the tiny nicks in the skin provide an ideal setting for microorganisms to grow and multiply. If the hair must be cut, trim the hair close to the skin surface immediately before surgery.

Selection of antiseptics

Antiseptic solutions kill or inhibit almost all transient and many resident microorganisms, including most bacteria (except spores) and many viruses. Antiseptics are designed to remove as many microorganisms as possible without damaging or irritating the skin or mucous membranes. In addition, some antiseptic solutions have a residual effect (i.e., continue to kill microorganisms for a while after they have been applied).

The following antiseptic solutions are approved for use:

- Iodophors, various concentrations 0.5% to 10% (e.g., Betadine)
- Alcohols (60 to 90%), ethyl, isopropyl, "Rectified spirits"
- Chlorhexidine gluconate 2-4% (e.g. Hibitane, Hibiscrub) Iodines (3%), tincture and aqueous (e.g., Lugol's) (not for use on mucous membranes such as vagina)

Remember: Antiseptics do not have the same killing power as the chemicals used for HLD. Therefore, antiseptic solutions should never be used to:

- Disinfect inanimate objects, such as instruments and reusable gloves
- Clean surfaces, such as floors or countertops

Instruments and items such as pickups (lifters, cheatle forceps), scissors, scalpel blades, catgut, umbilical tie thread and suture needles should never be left soaking in an antiseptic solution like Savlon; they should always be stored dry. Microorganisms can live and multiply in antiseptic solutions and contaminate the instruments and other items, leading to infections.

Storage and dispensing of antiseptics

Antiseptics can be contaminated if it is not properly prepared and stored. Microorganisms that can contaminate antiseptic solutions include *Staphylococcus epidermidis*, *S. aureus*, *Serratia marcescens*, *Pseudomonas aeruginosa*, other gram-negative bacilli, and some endospores. Contaminated antiseptics can cause subsequent infection when used for surgical hand preparation or prepping a patient's skin prior to surgery.

The following can prevent contamination of antiseptic solutions:

- Pour the antiseptic into a small, reusable container for single use, unless supplied commercially in small quantities. This prevents evaporation and contamination. Each time, make sure the container is labelled with the name of the solution that it contains. Do not store antiseptic solutions in patient care areas.
- Do not store antiseptic solutions in open containers.
- Do not store gauze or cotton swabs in antiseptics.
- Establish a routine schedule for preparing new solution (Solutions are at an increased risk of becoming contaminated after 1 week of storage.)
- Empty and clean reusable containers before refilling. Do not “top off” antiseptic dispensers (i.e., do not add new solution to existing solution in the container, but instead, empty and clean first). Wash reusable containers thoroughly with soap and clean water, rinse with clean water, if available, and air-dry completely before refilling.
- Label reusable containers with the date they are refilled.
- Store concentrated antiseptic solutions in a cool, dark area. Never store them in direct sunlight or in excessive heat (e.g., upper shelves in a tin-roofed building) because this can reduce the antimicrobial effectiveness of the solution.

HAIR REMOVAL

Removal of hair from the intended site of surgical incision using razor blade has traditionally been part of the routine preoperative preparation of patients undergoing surgery. It is possible that hair removal increases the risk of SSI by causing microscopic trauma of the skin. To minimize the potential of skin trauma, the use of clippers instead of razors has been proposed for preoperative hair removal.

3.2.5 Sterile Instruments and Devices

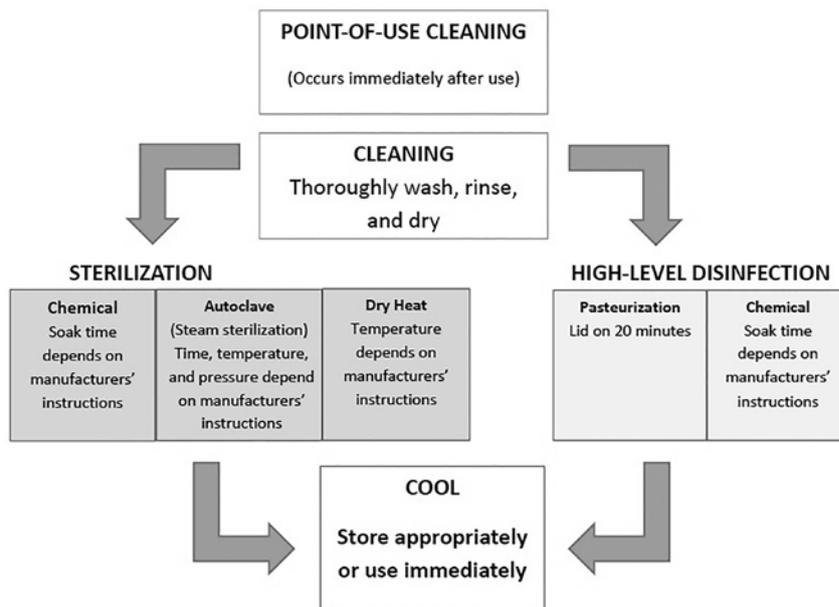
If surgical instruments or medical devices are not adequately cleaned, and then either high-level disinfected or sterilized, healthcare-associated infections can result, including surgical site infections, and infections with blood borne pathogens (e.g., hepatitis B and C, HIV). Therefore, it is critical that the HCWs who are responsible for processing instruments follow all steps carefully to provide adequately cleaned and high-level disinfected or sterilized instruments for patient care. The purpose of processing of instrument is to reduce the spread of micro organisms by equipment,

instrument and other items while reusing these materials for providing services. It is not only for clients/patients but also for service providers and clinic support staff.

Major Steps in Reprocessing Instruments and Medical Devices

1. Point -of - Cleaning (includes holding in detergent water, drying and wrapping)
2. HLD or sterilization
3. Storage

Figure 3-5: Steps of Reprocessing Instruments and Medical Devices



Adapted from: Tietjen et al. 2003.

a) Point-of-use cleaning:

Instruments and materials used during an operation will be covered with blood and tissue remains. They may have been in touch also with chemicals and fluids, dirt and dust. Hinged instruments may have remnants of blood and tissue from the operation. The tubing of hollow instruments may be also full of these soiled materials. Before proceeding for the processing of instruments and devices, used devices are prepared for reprocessing at the point of use to ensure their safe transport and a minimal risk to SSD staff. This procedure is not a substitute for cleaning.

Point-of-use preparation helps to prolong the life of surgical instruments as dried blood and saline can cause the decomposition of stainless steel and make surgical instruments much more difficult to clean.

The following guidelines should be followed before sending instruments to SSD for cleaning:

- Remove any linen and disposable items and dispose of these items appropriately.
 - » Segregate sharps that can cause injury to healthcare workers.
 - » Sharps, such as knife blades and needles, should be correctly discarded.
- Remove gross soil from instruments by wiping with a damp clean dry cloth.
- Contaminated items should be contained in dedicated, fully enclosed, leak-proof and puncture-proof containers prior to transport.
- Soiled instruments should be opened (hinges open) and kept moist. Do not

- Transport in containers with water as water is a splash hazard.
- Soak used surgical instrument in tap water in case of delayed cleaning to prevent drying of the blood on the surgical instruments.
- Transport instruments in leak-proof containers; keep them moist by covering them with a wet towel to prevent drying of blood and body fluids.

Soaking of instruments in 0.5% chlorine solution or any other disinfectant before cleaning is not recommended for the following reasons:

- It may damage/corrode the instruments
- The disinfectant may be inactivated by blood and body fluids, which could become a source of microbial contamination and formation of biofilm
- Transportation of contaminated items soaked in chemical disinfectant to the decontamination area may pose a risk to healthcare workers and result in inappropriate handling and accidental damage
- May contribute to the development of antimicrobial resistance to disinfectants.

HCWs responsible for cleaning used instruments should wear personal protective equipment, including utility or heavy-duty rubber gloves, goggles or a face shield, a plastic apron, and protective shoes. These are most effective in providing protection from accidental exposure to blood-borne pathogens and their use is cost effective.

b) Cleaning

The most important step in reprocessing reusable instruments is thorough cleaning and rinsing. Cleaning removes a number of microorganisms and other organic and inorganic materials. Thorough cleaning is essential before high-level disinfection and sterilization because inorganic and organic materials that remain on the surfaces of instruments interfere with the effectiveness of these processes. Cleaning is accomplished by manual cleaning with cleaning chemicals (detergent) and water, brushing or flushing, or by using mechanically using washer/disinfector machines to remove foreign material. Not every facility has a high level of resources (i.e. mechanical cleaning equipment), but medical devices must be thoroughly cleaned prior to disinfection or sterilization, irrespective of available resources.

Minimum items required

- Soap or detergent
- Clean water
- Brush (fine bristled), such as a toothbrush
- Utility gloves and other protective attire

Process

- Use of appropriate detergent is important for effective cleaning because water alone will not remove protein, oils and grease. The use of hand (bar) or powdered soap is discouraged because the fatty acids in bar soap react with the minerals in hard water leaving a residue or scum (insoluble calcium salt), which is difficult to remove. Using liquid soap, if available, is preferable because it mixes more easily. Do not use abrasive detergents (e.g., Vim or Comet) because they may damage instruments.

Remember:

- Only use appropriate detergents for instrument cleaning in the SSD. Detergents used for home cleaning or laundry use are not suitable for the cleaning of medical devices or instruments.
- Chemicals, like disinfectants and detergents, function best at their optimal dilution - making a stronger solution does not necessarily mean it will be more effective.
- For effective cleaning it is essential that the detergents are prepared at the concentration recommended by the manufacturer/supplier.
- Completely submerge immersible items during the cleaning process to minimize aerosolization and to assist in cleaning.
- Remove gross soil using tools, such as brushes and single-use cloths.
- Be sure to remove all materials caught in the small spaces (e.g., between the teeth of clamps or hemostat) and around the joints.
- **Rinsing:** Rinsing following cleaning is necessary to remove loosened soil and residual detergent. Rinse all devices thoroughly after cleaning with water to remove residues, which might react with the disinfectant/sterilant.
- **Drying:** Drying is an important step that prevents microbial growth and dilution of chemical disinfectants, which may render them ineffective. Devices should be air-dried or dried by hand with a clean, non-linting cloth preferably single use. (Water from wet instruments will dilute chemicals used for sterilization or disinfection.) Drying is not necessary for instruments which are to be boiled.
- Visually inspect all instruments for any residual soil or defect and discard them accordingly for repeat cleaning
- Lubricate any instrument that has become rigid and difficult to use. Use only the medical grade lubricant approved for surgical instruments.

c) High-Level Disinfection

High-level disinfection (HLD) is effective in destroying all microorganisms but does not always kill endospores. High-level disinfection is appropriate for items that do not come into contact with the bloodstream or tissues under the skin. Also, when sterilization is not possible, high-level disinfection is the only acceptable alternative for processing instruments and other items for reuse. For some healthcare facilities in many limited-resource settings, high-level disinfection may be the only option for processing instruments and medical devices in. Healthcare facility teams should do a thorough review of available products, resources, and existing space and layout of the instrument reprocessing areas before selecting a method of high-level disinfection.

HLD can be achieved by two techniques:

- Boiling and
- Chemical disinfection.

Boiling**Items required**

- Clean pot with a lid
- Water
- Fuel source: Either electric stove or kerosene stove

Process

- Clean and rinse items thoroughly. Open jointed instrument such as clamps and scissors. Disassemble items composed of more than one part. Make sure that any bowls and containers to be disinfected are full of water.
- Immerse items completely, covered them with at least 1 inch of water, and ensure that there are no air pockets in the lumens of the items.
- Cover and bring water to a rolling boil. Boil items for 20 minutes. Begin timing after water reaches a rolling boil. Do not add or remove any item once timing begins.
- Lower heat to keep water at a rolling boil because too vigorous boiling wastes fuel, evaporates the water and may damage equipment.
- After 20 minutes, remove items from water using high-level disinfected forceps/pickups.
- Allow items to air dry.
- Use items immediately or, using high-level disinfected forceps or sterile gloves, place the objects in an HLD container with a tight-fitting cover. Ensure that the instruments are completely dry before the container is tightly closed. Can store in a high-level disinfected container for up to 1 week.
- Use the same water throughout the day, adding only enough to keep the surfaces at least 2 cm above the equipment to be disinfected. Frequent draining and replacement of water increases the risk of mineral deposit.

Chemical disinfection

Disinfectants are able to achieve different levels of disinfection based on the chemical and exposure time. Several products can be used both as high-level disinfectants and sterilants based on the exposure time. It is critical to choose the appropriate disinfectant and exposure time to achieve the desired disinfection level.

Items required

- Disinfectant solution such as a 2-4% glutaraldehyde (i.e., Cidex) or Orthophthalaldehyde (OPA) 0.55%
- Plastic bucket or clean container for soaking
- Boiled and cooled water for rinsing

Process

- Clean and rinse items thoroughly.
- Completely immerse items in a high-level disinfectant solution so that the solution touches all surfaces. Open jointed instrument such as clamps and scissors. Disassemble items composed of more than one part. Make sure that any bowls and containers to be disinfected are full of chemical solution.
- Soak for 20 minutes. Do not add or remove any items once timing has begun. Remove, using disinfected forceps or gloves.
- Thoroughly rinse items with boiled water.
- Allow to air dry. Use immediately or store in a high-level disinfected container for up to 1 week.

Note:

- Glutaraldehyde must be activated with an alkalizing agent before use. Once activated, it remains effective for 14 days.

- Disposal of used chemicals: carefully pour waste chemical disinfectants down a utility sink drain or into a flushable toilet or latrine and rinse or flush with water. Glutaraldehyde requires neutralization prior to disposal.

Precautions

- The vapours of glutaraldehyde are toxic and irritating to the skin, eyes and respiratory tract. Always wear appropriate PPE and use it in a well-ventilated area.
- Chemical disinfection of needles and syringes should be avoided because they are difficult to rinse effectively, and chemical residues may interfere with the action of medications being injected.

Wear appropriate PPE to protect eyes, face, and hands while doing chemical HLD.

3.2.4.5 Sterilization

Sterilization kills all microorganisms including endospores and should be used for all objects entering body cavities or the vascular system. Sterilization can be achieved by using steam (autoclaving), dry heat (oven) or soaking in a chemical sterilant.

Sterilization is only effective if the cleaning process prior to sterilization is maintained. Other factors impacting the effectiveness of sterilization include the types of microorganisms on the device, the number and location of microorganisms, and the type and amount of organic material surrounding the microorganism that may protect it from the steam or chemical sterility. Additionally, the effectiveness of sterilization depends upon key parameters of the process, which, depending on the process used, include temperature, humidity, pH, water quality, contact time, pressure, and chemical concentration.

Steam sterilization

High-pressure saturated steam is generally the method of choice for sterilizing instrument and other items used in family planning and other healthcare facilities.

Items required

- Autoclave
- Wrapping material (paper or double-layered cotton)
- Fuel source: electricity or kerosene stove
- Water

Process

- Clean, rinse and air-dry items thoroughly.
- Wrap items with desired wrapping materials.
- Arrange items/packs in autoclave to allow free circulation of steam.
- Sterilize wrapped items for 30 minutes, unwrapped items for 20 minutes at 121°C (250°F) and 106 kPa pressure (915 lbs./in). If using a mixed load, sterilize for 30 minutes. Start timing when required temperature and pressure have been reached.
- When time is complete, turn off heater and release the pressure valve. Wait until pressure gauge reads zero (approximately 20 to 30 minutes) to prevent steam from escaping abruptly when opening the door and hurting the person performing the procedure.

- **Shelf life:** The shelf life of a sterile item depends on many factors like quality of the wrapping materials, wrapping methods, number of times a package is handled, whether the package is stored on open or closed shelves, condition of the storage area (e.g., temperature, humidity, and cleanliness), stacking of packs on top of each other and overcrowding of shelves and cabinets and method of sealing. Considering these factors, well stored sterile items can use up to 14 days. Any item that has been sterilized should not be used after the expiration date has been exceeded or if the sterilized package is wet, torn, or punctured.

Chemical sterilization

Chemical sterilization may be used for items which are sensitive to heat such as endoscopes.

Items required

- Chemical sterilant: 2-4% glutaraldehyde (i.e., Cidex)
- Clean container with cover
- Sterile water for rinsing

Process

- Clean, rinse and dry items thoroughly.
- Completely immerse items in chemical sterilant solution. Open jointed instrument such as clamps and scissors. Disassemble items composed of more than one part. Make sure that any bowls and containers to be disinfected are full of chemical solution.
- HCW carrying out instrument processing using glutaraldehyde should wear recommended PPE.
- Allow to soak for 10 hours in 2% glutaraldehyde solution. Do not add or remove any items once timing has begun.
- Remove items with sterile forceps/pickups, rinse well with sterile water and allow to air dry.
- Items well stored in a covered sterile container can be used up to 14 days. See above for factors affecting shelf life of sterile items.

Note:

- Glutaraldehyde must be activated with an alkalizing agent before use. Once activated, it remains effective for 14 days.
- **Disposal of used chemicals:** Carefully pour waste chemical disinfectants down a utility sink drain or into a flushable toilet or latrine and rinse or flush with water. Glutaraldehyde requires neutralization prior to disposal.

Precautions

The vapour of glutaraldehyde is toxic and irritating to the skin, eyes and respiratory tract. Always wear appropriate PPE and use it in a well-ventilated area.

Storing Sterile Surgical Instruments and Medical Devices

It is essential to store sterilized surgical instruments and medical devices in such a way that the sterility of the items is maintained until the time they are used. Below are key measures to maintain the shelf life of sterile items:

- Sterile packs and drums should be labeled with an expiry date after which the items must be reprocessed. This process serves as a reminder but does not guarantee sterility of the packs within the given date. Sterility within the expiry date can be compromised by many factors.
- Store sterile items in a cool, dry, and well-ventilated place.

- To protect them from splashes and contamination, sterile items should never be stored in the open areas where patient care is provided and where contaminated material is cleaned and prepared for sterilization or disinfection.
- Sterile items should be stored at least 20–25 cm (8–10 inches) above the floor, at least 46 cm (18 inches) below the ceiling and at least 5 cm (2 inches) from outside walls.
- Do not use cardboard boxes for storage. Cardboard boxes shed dust and debris and may harbour insects.
- Sterilized/disinfected equipment should be stored in enclosed shelves. If the items need to be stored in open shelves sterile packs should be covered with plastic dust covers to protect them from moisture, dust and debris. The storage area should be easily accessible, but away from circulation of contaminated material and individuals not related to the preparation or handling of equipment and materials.

REMEMBER

- Store the packs when they reach room temperature.
- Do not place warm packages in plastic dust covers. Moisture will be trapped and remain there until opened.
- If the pack is dropped, torn or gets wet, consider it contaminated.

3.3 MANAGEMENT OF HEALTHCARE WASTE

The term healthcare waste includes all the waste generated within healthcare facilities, research centres and laboratories related to medical procedures. Management of healthcare waste is an integral part of hospital hygiene and infection prevention. Healthcare waste can be considered as a reservoir of pathogenic microorganisms, which – if someone is exposed – could give rise to an avoidable infection. If waste is inadequately managed, these microorganisms can be transmitted by direct contact, by inhalation or by a variety of animal vectors (e.g. flies, rodents, roaches), which could come into contact with waste.

Between 75% and 90% of the waste produced by healthcare providers is general or non-hazardous healthcare waste. It comes mostly from the administrative, kitchen and housekeeping functions at healthcare facilities and may also include packaging waste and waste generated during maintenance of healthcare buildings. The remaining 10–25% of healthcare waste is regarded as “hazardous” and may pose a variety of environmental and health risks.

The purposes of proper management of health care wastes are to:

- Prevent the spread of infection to clinic personnel who handle the waste, and to the local community.
- Protect those who handle wastes from accidental injury.
- Provide an aesthetically pleasing atmosphere.
- Prevent infestation of vermin and other disease carriers.

Categories of healthcare waste:

Hazardous healthcare waste	
Sharp waste	Used or unused sharps (e.g. hypodermic, intravenous or other needles; auto-disable syringes; syringes with attached needles; infusion sets; scalpels; pipettes; knives; blades; broken glass)
Infectious waste	Waste suspected to contain pathogens and that poses a risk of disease transmission (e.g. waste contaminated with blood and other body fluids; laboratory cultures, excreta and other materials that have been in contact with patients infected with highly infectious diseases in isolation wards)
Pathological waste	Human tissues, organs or fluids; body parts; fetuses; unused blood product
Pharmaceutical waste	Pharmaceuticals that are expired or no longer needed; items contaminated by or containing pharmaceuticals
Cytotoxic waste	Cytotoxic waste containing substances with genotoxic properties (e.g. waste containing cytostatic drugs – often used in cancer therapy; genotoxic chemicals)
Chemical waste	Waste containing chemical substances (e.g. laboratory reagents; film developer; disinfectants that are expired or no longer needed; solvents; waste with high content of heavy metals, e.g. batteries; broken thermometers and blood-pressure gauges)
Radioactive waste	Waste containing radioactive substances (e.g. unused liquids from radiotherapy or laboratory research; contaminated glassware, packages or absorbent paper; urine and excreta from patients treated or tested with unsealed radionuclides; sealed sources)
Non-hazardous or general healthcare waste	Waste that does not pose any particular biological, chemical, radioactive or physical hazard

Major steps of healthcare waste management

1. Segregation
2. Storage
3. Transport
4. Disposal

The following general principles of waste segregation, storage and transportation relate to the control of waste flow from generation to disposal:

- Healthcare waste is generated in a medical area and should be segregated into different fractions, based on their potential hazard and disposal route, by the person who produces each waste item;
- Separate containers should be available in each medical area for each segregated waste fraction;
- Waste containers when filled should be labelled to help managers control waste production; closed local storage inside or nearby a medical area may be needed if waste is not collected frequently;
- Hazardous and non-hazardous waste should not be mixed during collection, transport or storage;

- Collected waste is often taken to central storage sites before onsite or offsite treatment and disposal;
- Staff should understand the risks and safety procedures for the waste they are handling.

1. Segregation:

Segregation should be carried out by the producer of the waste as close as possible to its place of generation, which means segregation should take place in a medical area, at a bedside, in an operating theatre or laboratory by nurses, physicians and technicians. If classification of a waste item is uncertain, as a precaution it should be placed into a container used for hazardous healthcare waste.

Waste containers, colour codes and labels

Colour coding and labeling makes it easier for medical staff and hospital workers to put waste items into the correct container, and to maintain segregation of the waste during transport, storage, treatment and disposal. Colour coding also provides a visual indication of the potential risk posed by the waste in that container. Ideally, the same system of segregation should be in force throughout a country.

Table 3.6: WHO-recommended segregation scheme

Type of waste	Colour of container and markings ^a	Type of container
Type of waste Highly infectious waste	Yellow, marked "HIGHLY INFECTIOUS; with biohazard symbol	Strong, leak-proof plastic bag. or container capable of being autoclaved
Other Infectious waste, pathological and anatomical wasteSharps	Yellow with biohazard symbol Yellow, marked "SHARPS, with biohazard symbol	Leak-proof plastic bag or container Puncture-proof container
Chemical and pharmaceutical waste ^b	Brown, labelled with appropriate hazard symbol	Plastic bag or rigid container
Radioactive waste ^b	Labelled with radiation symbol	Lead box
General health-care waste	Black	Plastic bag

^a see Figure 7 (which lists the biohazard and radatin symbols)

^b NOT produced in all hospitals

Waste containers: specifications and siting

Waste containers can come in many shapes and sizes and be made from different materials. Many modern waste containers are designed for automated systems that empty their contents into the waste-disposal system and wash and disinfect them mechanically. At the other end of the scale, waste containers may also be made out of reused plastic and metal containers. In all cases, they should be sturdy and leak-proof, and (except for sharps containers) lined with a sturdy plastic bag. The recommended thickness of bags for infectious waste is 70 µm (ISO 7765 2004). Plastic used for either containers or bags should be chlorine-free. Not all plastic bags can withstand temperatures of 121 °C, and some can melt during an autoclave process.

Since sharps can cause injuries that leave people vulnerable to infection, both contaminated and uncontaminated sharps should be collected in a puncture-proof and impermeable container that is difficult to break open after closure.

Sharps containers may be disposable or designed for disinfection and reuse. Disposables are boxes made of plasticized cardboard or plastic; reusable designs are plastic or metal. Low-cost options include the reuse of plastic bottles or metal cans. If this is to be done, the original labels should be removed or obscured, and the containers should be clearly relabeled as “Sharps containers”.

Collection within the health facility:

Collection times should be fixed and appropriate to the quantity of waste produced in each area of the healthcare facility. General waste should not be collected at the same time or in the same trolley as infectious or other hazardous wastes. Waste bags and sharps containers should be filled to no more than three quarters. Once this level is reached, they should be sealed ready for collection. Plastic bags should never be stapled but may be tied or sealed with a plastic tag or tie. Replacement bags or containers should be available at each waste-collection location so that full ones can immediately be replaced. Persons handling wastes should wear protective attire including heavy gloves.

2. Storage inside healthcare facilities:

Central storage areas are places within a healthcare facility where different types of waste should be brought for safe retention until it is treated or collected for transport offsite. The general requirements (see below) are relevant to most types of healthcare facilities where sufficient waste is produced and needs to be stored centrally.

Recommendations for storage facilities for healthcare waste the storage area should:

- Have an impermeable, hard-standing floor with good drainage (away from watercourses); the floor should be easy to clean and disinfect;
- Include the facility to keep general waste separated from infectious and other hazardous waste;
- Have a water supply for cleaning purposes;
- Have easy access for staff in charge of handling the waste;
- Be lockable to prevent access by unauthorized persons;
- Have easy access for waste-collection vehicles;
- Have protection from the sun;
- Be inaccessible to animals, insects and birds;
- Have good lighting and at least passive ventilation;
- Not be situated in the proximity of fresh food stores and food preparation areas;
- Have a supply of cleaning equipment, protective clothing and waste bags or containers located conveniently close to the storage area;
- Have a washing basin with running tap water and soap that is readily available for the staff; be cleaned regularly (at least once a week);
- Have spillage containment equipment;
- Be appropriate to the volumes of waste generated from each healthcare facility.

3. Offsite transport of waste:

Offsite transport is the carriage of healthcare waste on the public streets away from a healthcare facility. Transporting hazardous healthcare waste should comply with national regulation.

Vehicles and transporting containers used for the transportation of waste should be cleaned and disinfected daily after use. Mechanical cleaning, combined with soaps and detergents, which act as solubility promoting agents, can be used. Cleaning and disinfection have to be carried out in a standardized manner or by automated means that will guarantee an adequate level of cleanliness.

A standard operating procedure for cleaning should be prepared and explained to cleaning staff. In addition, a schedule for preventive maintenance should be set up for all equipment and vehicles used in the transportation process.

4. Health care waste treatment and disposal:

Solid Waste Management Act 2011 has clearly indicated that processing and management of hazardous waste, medical waste, chemical waste or industrial waste under the prescribed standards shall rest with the person or institution that has generated the waste. So, all the health institutions must treat and dispose the waste properly so that it will minimize health hazards to health staff, community and the environment.

It is necessary to do correct segregation of waste so that we can prevent contamination of nonhazardous waste. As mentioned above, about 85% of health care waste is general or nonhazardous. This waste can be reused or recycled or turned into compost or disposed in ordinary waste management system. Only minimum amount of waste can be categorized as risky healthcare waste requiring special attention.

There are various ways available to treat and dispose healthcare waste. There is no single method fit for all the places. It depends mainly on the types of waste, volume, site, available resources, trained human resources, etc. This standard is mainly focused on the family planning programme and most of the waste produced from the clinic is not complicated as from the general hospital. Hence, here are some possible ways to treat and dispose the healthcare waste produced from the family planning clinics:

1. Autoclave:

Autoclaving is the best approach for disposing the hazardous healthcare waste. The main principle of using autoclave for disposal of healthcare waste is to make it less hazardous. The all the requirement and technology of doing autoclave is same as autoclaving of medical equipment for service procedures. The capacity of autoclave depends on the volume of the waste. Treated waste from an autoclave retains its physical appearance. If desired, a mechanical process such as a shredder or grinder is used after treatment to make the waste unrecognizable. Shredding reduces the volume of the treated waste by 60–80%, but is prone to breakdowns.

2. Biological process:

Biological processes are found in natural living organisms but refer specifically to the degradation of organic matter when applied to healthcare waste treatment. Some biological treatment systems use enzymes to speed up the destruction of organic waste containing pathogens. Composting and vermiculture (digestion of organic wastes through the action of worms) are biological processes and have been used successfully to decompose hospital kitchen waste, as well as other organic digestible waste. This approach is being used in some of the hospitals of Nepal.

3. Incineration:

Incineration is a high-temperature, dry oxidation process that reduces organic and combustible waste to inorganic, incombustible matter and results in a significant reduction of waste volume and weight. High-heat thermal processes take place at temperatures from about 200 °C to more than 1000 °C. They involve the chemical and physical breakdown of organic material through

the processes of combustion, pyrolysis or gasification. A disadvantage of these technologies is the release of combustion by-products into the atmosphere and the generation of residual ash. The combustion of healthcare waste produces mainly gaseous emissions, including steam, carbon dioxide, nitrogen oxides, and a range of volatile substances. To protect from environment hazard, incinerators require emission control equipment to meet modern emission standards.

In Nepal, there is a practice of using small-scale incinerators which are designed to meet an immediate need for public health protection where there is no access to more sophisticated technologies. In 2004, WHO commissioned a screening-level health risk assessment for exposure to dioxins and furans from small-scale incinerators. The study found that the expected practice with small-scale incinerators resulted in unacceptable cancer risks under medium usage (two hours per week) or higher. The report concluded that small-scale incineration should be viewed as a transitional means of disposal for healthcare waste. Single-chamber, drum and brick incinerators do not meet the BAT requirements of the Stockholm Convention guidelines (Secretariat of the Stockholm Convention, 2006).

4. Encapsulation:

Disposal of untreated healthcare waste in municipal landfills is not advisable. However, if the healthcare facility has no other option, the waste should be contained in some way before disposal. Encapsulation is an approach, which involves filling containers with waste, adding an immobilizing material, and sealing the containers. The process uses either cubic boxes made of high-density polyethylene or metallic drums, which are three quarters filled with sharps or chemical or pharmaceutical residues. The containers or boxes are then filled up with a medium such as plastic foam, bituminous sand, cement mortar, or clay material. After the medium has dried, the containers are sealed and placed into landfill sites.

Protective equipment for handling health care waste:

- The most effective protective equipment in reducing risk of injury are gloves to protect from exposure to blood, other potentially infectious materials and chemicals; particulate masks (respirators) to protect from respiratory infections, hazards and particulates from burning waste; and boots for waste handlers to protect from sharps injuries to the foot. Availability and access to soap and water, and alcohol hand rub, for hand hygiene are also important to maintain cleanliness and inhibit the transfer of infection via dirty hands. The type of protective clothing used will depend to an extent upon the risk associated with the healthcare waste, but the following should be made available to all personnel who collect or handle waste:

Obligatory

- Disposable gloves (medical staff) or heavy-duty gloves (waste workers)
- Aprons - overalls (coveralls)
- Leg protectors and/or boots

Depending on type of operation

- Eye protectors (safety goggles)
- Face masks (if there is a risk of splash into eyes)
- Helmets, with or without visors

3.4. ENVIRONMENTAL INFECTION PREVENTION AND CONTROL

Policies and procedures for routine cleaning and disinfection of environmental surfaces should be included as part of the infection prevention plan. Cleaning removes large numbers of microorganisms from surfaces and should always precede disinfection. Emphasis for cleaning and disinfection should be placed on surfaces that are most likely to become contaminated with pathogens, including clinical contact surfaces (e.g., frequently touched surfaces such as light handles, bracket trays, switches on dental units, computer equipment) in the patient-care area. When these surfaces are touched, microorganisms can be transferred to other surfaces, instruments or to the nose, mouth, or eyes of HCWs or patients. Although hand hygiene is the key to minimizing the spread of microorganisms, clinical contact surfaces should be barrier protected or cleaned and disinfected between patients. Staff should follow manufacturer recommendations for use of products selected for cleaning and disinfection (e.g., amount, dilution, contact time, safe use, and disposal). Facility policies and procedures should also address prompt and appropriate cleaning and disinfection of spills of blood or other potentially infectious materials. Housekeeping surfaces (e.g., floors, walls, sinks) carry less risk of disease transmission than clinical contact surfaces and can be cleaned with soap and water or cleaned and disinfected if visibly contaminated with blood.

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CHAPTER 4

QUALITY IMPROVEMENT IN FAMILY PLANNING SERVICES

4.1 INTRODUCTION

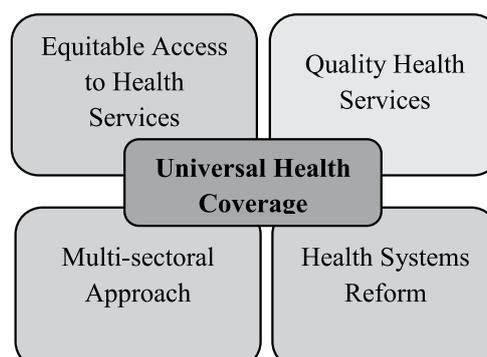
The Ministry of Health and Population (MoHP) is committed to improve the overall health of Nepali citizens by providing curative, preventive, promotive, rehabilitative and palliative services through governmental, non-governmental and private sectors. The desired outcomes, however, cannot be achieved without assuring optimum quality of health services. MoHP's commitment on quality health services is reflected in various policy and strategy documents.

The Constitution of Nepal has ensured health as basic human rights. National Health Policy 2075 has emphasized provision of quality health services. Policy on Quality Health Services (2007) has intended not only to improve the quality of service provision but also to ensure a functional QA system including QA as an integral part of the essential healthcare delivery system

Over the decade, Nepal had expanded public health services to remote corners of the country. The expansion had, in many instances, not been accompanied by improved quality at the point-of-care. Increasing the utilization of health services may not improve health outcomes unless the services are also characterized by excellence in delivery along with benchmarks for good quality. The Mid-term Review of NHSP II (2010-2015) explicitly highlighted that, *“Access has been the focus (in the past), now more attention on quality of care is needed as a matter of priority.”*

Nepal Health Sector Strategy, NHSS (2015-20) aims at accelerating Universal Health Coverage to ensure equitable access to quality health services for the population. It has identified four core strategic directions for the next five years and quality of health services is one of them. Improving quality of healthcare services requires a focus on the performance across the entire health system. NHSS has focused on improving the quality at point-of-delivery, where people receive health services, from immunizations at remote out-reach clinics to specialty care provided at tertiary hospitals. In context of federal government system, the new structure of MoHP has Quality Assessment and Regulation Division which also shows MoHP's commitment to improving quality of health services.

Figure 4-1: Four Key Strategic Directions of NHSS 2015-2020



NHSS considered the care is qualitative when it is **effective, safe, client-centered, timely, equitable, culturally appropriate and reliable (dimensions of quality of care)**. NHSS has also prioritized quality assurance and improvement in different aspects of health services including family planning. Furthermore, the GoN passed a bill relating to Social Health Security (Health Insurance) on October 10, 2017 and has been expanding the programme across the country intending to protect the rights of the citizens to get quality health services.

Quality of care¹³ is *the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.*

Data¹⁴ show that quality of care in most countries, particularly low- and middle-income countries, is suboptimal, as revealed by the following examples.

- Adherence to clinical practice guidelines in eight low- and middle-income countries was below 50% in several instances, resulting in low-quality antenatal and child care and deficient family planning.
- The Service Delivery Indicators initiative in seven low- and middle-income countries showed significant variation in provider absenteeism (14.3–44.3%), daily productivity (5.2–17.4 patients), diagnostic accuracy (34–72.2%), and adherence to clinical guidelines (22–43.8%).
- A systematic review of 80 studies showed that suboptimal clinical practice is common in both private and public primary healthcare facilities in several low- and middle-income countries.

High-quality health services involve the right care, at the right time, responding to the service users' needs and preferences, while minimizing harm and resource waste. Quality healthcare increases the likelihood of desired health outcomes. Achieving Universal Health Coverage is not possible without addressing Quality of Healthcare Services.

The Lancet Global Health Commission¹⁵ mentions that 'Poor-quality care is now a bigger barrier to reducing mortality than insufficient access. 60% of deaths from conditions amenable to health care are due to poor-quality care, whereas the remaining deaths result from non-utilisation of the health system. More people die from poor quality care than poor access to care in low- and middle-income countries.'

As per the federal government system, local government has authority and management of providing basic health services with support from provincial and federal government. So, there is necessity to develop quality improvement mechanisms in all three tiers of government system along with their explicit roles and responsibilities. MoHP, Management Division, Quality Assurance Section has developed Quality Improvement (QI) tools to assess the quality of reproductive health services including family planning. This is suggested checklist, can be modified by the provincial and local governments as required. Similarly, Minimum Service Standards (MSS) at all level hospitals and health posts could be used, which primarily deals with service readiness.

4.2 MEANING OF QUALITY FAMILY PLANNING SERVICES

Quality healthcare is a relative term and has different connotations for different people. However,

13 *Delivering quality health services: A global imperative for universal health coverage*, WHO, World Bank Group, OECD, 2018

14 *Delivering quality health services: A global imperative for universal health coverage*, WHO, World Bank Group, OECD, 2018

15 High-quality health systems in the Sustainable Development Goals era: time for a revolution, HQSS, Lancet Global Health Commission. 2018

different individuals and institutions have given definition of quality family planning service to make it clear. IPPF’s QOC Workshop South Asia Region, 1992 has defined quality FP as "Quality family planning means the delivery of services to the clients based on free choice of available methods by trained manpower (service provider) with information and counselling keeping in view the client’s perspectives, essential service standard, resources and the environment, to meet the needs and expectations of present client and attract future acceptors."

4.2.1 Components of Quality Family Planning Services

Quality health service encompasses multiple aspects of health services. So, sometimes it is difficult to say what is not included in quality health services. The Bruce-Jain framework, developed in 1990 especially for quality family planning programme consists of six elements:

Table 4-1: Components of Quality Family Planning Services and Indicators

S. No	Component	Description	Indicators
1	Choice of Methods	Refers both to the number of methods offered on a regular basis and also to the appropriateness of the methods provided.	<ul style="list-style-type: none"> Percentage of health facilities offering all five types of temporary modern family planning methods (IUCD, Implant, Injectable, Pills and Male Condom) Percentage of health facilities offering permanent family planning methods (Minilap and NSV) Percentage of family planning users who obtained contraceptive method of choice Percentage of women who choose their contraceptive method individually or jointly Percentage of health facilities which provide family planning services from 10am to 4pm on all working days No. of clients referred to appropriate service sites if the chosen FP method is not available in the site
2	Information Given to Clients Counseling	Refers to the information given during counseling which enables the client to make a decision and ultimately use the contraceptive chosen with confidence and satisfaction.	<ul style="list-style-type: none"> Number of service providers who are trained on COFP and Counseling Percentage of family planning users who receive appropriate counseling services before making decision on the selected method Percentage of HF having counselling tools/aids (DMT, counselling kits, informed choice poster, etc.) Percentage of family planning users asked about - Were you informed about other methods? Were you informed about side effects? Were you told what to do if you experienced side effects? (FP Method Information Index) Percentage of health facilities which have job aids (MEC wheel, Pregnancy rule out checklist) for providing counseling services Percentage of FP clients who receive take home card/method specific brochure to get further details on the chosen method

S. No	Component	Description	Indicators
3	Technical Competence	Refers primarily to the technical competence of the service provider, adherence to protocols for specific methods, aseptic technique, etc.	<ul style="list-style-type: none"> • Number of service providers trained on IUCD and Implant • Number of service providers trained on Minilap and NSV • Number of health facilities having National Medical Standard for RH Vol: I Contraceptive Services • Number of health facilities having RH Protocol • Number of health facilities having essential materials required for infection prevention measures
4	Interpersonal Relation	Are there personal aspects of service delivery and the type of relationship between provider and client?	<ul style="list-style-type: none"> • Number of service providers who are trained on interpersonal communication • Percentage of family planning users who are satisfied with the behaviour of service providers • Percentage of family planning clients who said that they had been given opportunity to ask questions regarding their concerns • Proportion of family planning clients who responded that they were greeted, seated, had sufficient time with the provider and clearly understood the information provided
5	Continuity and Follow up	Relates to the programme's interest in and ability to promote continuation of contraceptive.	<ul style="list-style-type: none"> • Percentage of health facilities reported no stock out of contraceptives for last three months • Percentage of health facilities having follow up system for those clients who do not return on time for services
6	Appropriate Constellation of Services	Refers to the placement of services so that they are convenient and acceptable and respond to clients' needs both for family planning and related health services.	<ul style="list-style-type: none"> • Percentage of health facilities having proper waiting areas for clients • Percentage of health facilities having clean toilet facilities for clients • Percentage of health facilities having essential supplies available for FP services

Quality Improvement Principles

Quality in healthcare is often defined as providing client-centred services and meeting clients' needs. There are several reasons to improve the quality of the healthcare services provided at a facility. Improving quality safeguards, the health of both clients and staff, adds features to attract clients, maintains the organization's strengths, and leads to savings (less repeat work and waste).

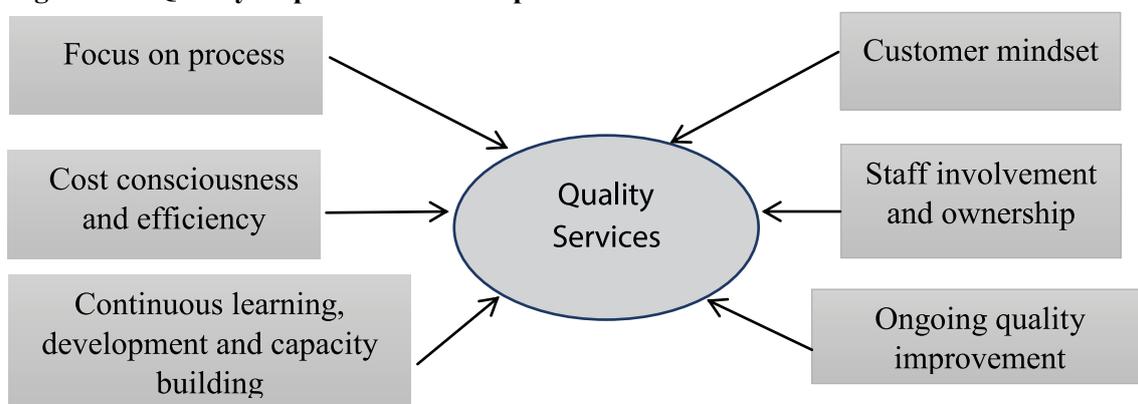
QI is based on the following principles:

- Taking on the **mindset of the customer** (client)—meeting the needs and expectations of clients
- Having staff become involved in and feel **ownership** of quality and of the process for improving

quality

- **Focusing on processes** and systems and recognizing that poor quality is often a function of weak systems, weak processes, or implementation problems, rather than the fault of individuals
- Promoting **efficiency and cost-consciousness** by eliminating the costs of poor quality (e.g., repeat work and waste)
- Encouraging **continuous staff learning, development, and capacity-building**, since staff need skills to carry out the QI processes and provide quality services, and supervisors and team leaders need to be able to facilitate the work of staff and the development of those skills
- Implementing **continuous QI work**, as there will always be opportunities to improve what staff do and to have a sustained positive impact on services

Figure 4-1: Quality Improvement Principles



So, while implementing QI, all these aspects of quality improvement should be considered to improve overall quality of health services.

Source: COPE Handbook: A Process of Improving Quality in Health Services, Revised Edition, EngenderHealth. 2003

4.3 QUALITY IMPROVEMENT PROCESS

Quality Improvement is a problem-solving approach designed to improve health service delivery by addressing these system related challenges. QI is a continuous process, consisting of four steps: 1) Assessment 2) Analysis 3) Planning 4) Implementation. The GoN has formulated policy on quality assurance in health care services in 2007. As per the national protocol, the health facility should conduct a quality self-assessment every four months, using the QI modules to determine whether health services meet the programme standards. Following the assessment of health service quality, the next step is to identify and analyse needs: simple issues should be solved immediately while complex issues should be sorted by order of importance and included in an action plan for further improvement.

In addition, QI is a continuous process aiming to provide healthcare services to meet the expected standard and needs of service users. In QI approach, quality of service is continuously monitored based on the standards, guidelines and protocols. When there is a gap between the expected and actual service then this gap is filled with team-based problem-solving approach. It involves using appropriate methodologies to close the gap between actual and expected levels of quality.

4.3.1 Key Steps of Quality Improvement

Although the quality services provision is not a very new topic, a lot of innovative thinking has

been developed in recent days about its purpose, procedures to be adopted and how to measure the results. It would be better to set up in a more logical and systematic manner. Service providers and other staff of health institution, even the community including local leaders and members of HFOMC/hospital management committee, need to understand its importance and fulfil their responsibilities. The task of enhancing quality service is a continuous process and not one-time event. After the orientation to key stakeholders about the importance and process, following steps should be taken to improve the quality of services.

The QI assessment of health and family planning services helps facility-based health workers to determine whether their service provision is being performed as per the set standards or not. In addition, it also identifies the progress made and the shortcomings in regard to the services provided by the health institution. This process also empowers and motivates health workers to provide quality health services.

Step 1: Define/Determine quality (performance) standards

Standard is the expected quality of services. Standard is developed based on the international evidence and local needs. Guidelines, protocols, job aids and QI checklists are developed based on the standards. National Medical Standard, RH Vol. I: Contraceptive Services is the expected standard of family planning services of Nepal. In addition, **Minimum Service Standards (MSS)**¹⁶ should be referred for family planning services as appropriate for tertiary, secondary and primary hospitals and health posts¹⁷

Step 2: Assess the quality of services (actual performance) of the health institution

Assess quality of health and family planning services using QI tools to determine actual quality and performance. Various methods could be used for assessing quality of family planning services.

- **Self-Assessment:** The service providers together with concerned staff and management committee members of health facilities and hospitals can assess the quality of the services they are providing in their health facility. While assessing the services they must use the standard checklist and use action plan to improve the services based on the gaps identified during the assessment.
- **Peer-Assessment:** Peer(s) i.e. service providers themselves can assess the quality of the health service provided by their peers using QI tools. It is usually done for the assessment of the clinical services. They can provide feedback in areas that need improvement. It is important to have suitable environment to carry out such assessment and this should be done in an informal manner.
- **External-Assessment:** In this method, qualified trained staff from outside of the health facility visit and the health facility to assess the services using the standard checklist. The staff share the findings of the assessment to the health facility staff and facilitate to develop action plan to solve the problems.
- **Review of Records and Reports:** Assessment could be done by reviewing records and reports of the health institution.

Interview with a client or FP service users

Input or feedback received from clients or FP service users are important for improving the quality of health services. This could be done by interview with clients or FP service users (client exit interviews) which helps to identify their needs and perceptions. For this, other members of the QI

¹⁶ MSS for Tertiary Hospital, Secondary Hospital with basic services, Secondary Hospitals with higher services, QARD, MoHP 2075

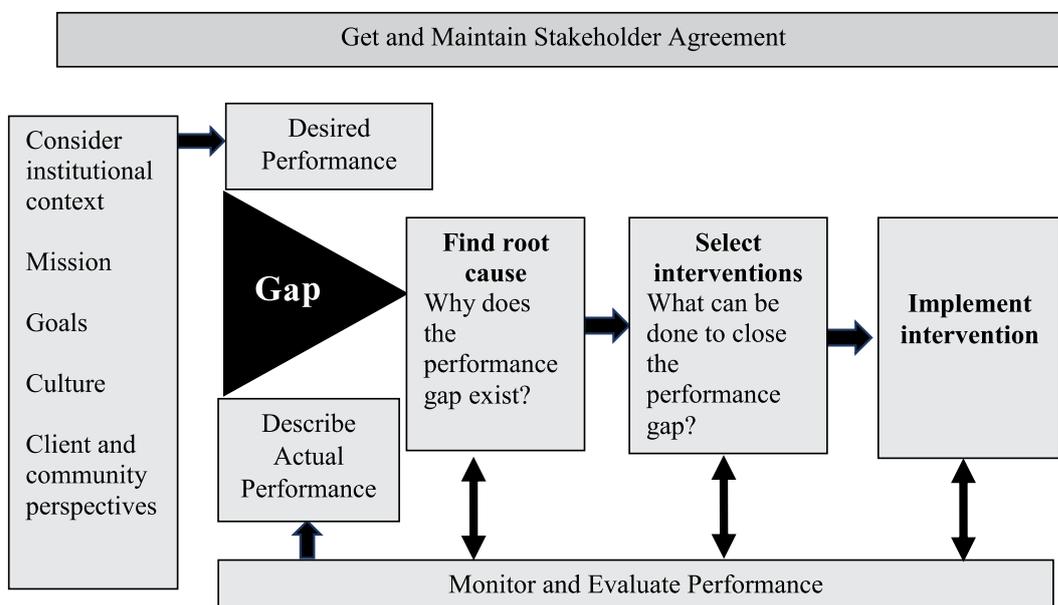
¹⁷ MSS for Health Post. Curative Services Division, DoHS, MoHP, 2076

Team (not service provider) should interview clients or FP service users.

Consideration of thoughts and perception of the community

In addition to taking inputs from clients, who have received services from health institutions, it is important to take inputs from the community. Meeting with the community, discussion with them and interviewing them help the health institution to understand their thoughts and perceptions. Collecting their suggestions and feedback will help improve the quality of services. Social audit is also an important way to get their input. It will also help to identify problems which can be included in the action plan to improve service quality. Community members can also help address the identified gaps.

Figure 4-2: Steps in Performance and Quality Improvement Process



Source: Supervising Healthcare Services: Improving the Performance of People, JHPIEGO, 2004_

Step 3: Identify Gaps

After assessing the actual performance of the services provided by a health institution, identify what are the main gaps between Desired Performance (Quality) and Actual Performance (Quality). Identification of these gaps should be taken as opportunity for improvement. If there are many gaps, it should be prioritized rather than trying to address all the gaps at once. It would be better to consider few (3-5) major gaps and address those.

Step 4: Find Out Root Cause(s)

If there is a gap between desired performance and actual performance, it means there is a problem. When you identify the gap, many people think it is enough and addressing those gaps would solve the problem. Just looking at the issue superficially from outside is not adequate to find out the root cause. But it is important to find out why gap(s) exist to find out the root cause for appropriate solution to the problem. If the root cause is not identified, all the efforts made may be futile. Once the root cause of the problem is found, we can look into various ways to solve the problem.

There are various ways to find out the root cause. One of the easiest ways to find out the root cause is ‘Why-Why Method’ i.e. asking what is the cause of this (problem)? Asking Why? Why? systematically 3-5 times helps to identify the root cause. This will help whether the problem is about capacity (knowledge and skills), capability (enabling environment) and motivation (willingness).

Step 5: Identification and Selection of Interventions and Prepare Action Plan

Once the root cause of the gap(s) between desired performance (quality) and actual performance (quality) is determined, interventions and activities should be identified and action plan should be prepared to improve the services.

Selection of the interventions to improve should be done in consultation/discussion with the health institution staff and management committee.

Selection of Interventions/Activities

Usually there will be a number of interventions needed when you try to improve the quality of health and family planning services. Therefore, it is important to prioritize to select interventions. Together with management committee, staff, clients and other community members should decide which interventions are most important. Consider the following points to determine the priorities.

- **Resource allocation:** Is the intervention affordable? Do the necessary resources exist to complete this intervention? If so, are there resources to maintain it? Are there other ways to act on this intervention that might cost less?
- **Feasibility:** Is there a system in place to support this intervention? Is it realistic? How long will it take to mobilize the resources to get it done? How many other people or groups of people need to be involved to get it done?
- **Acceptability:** Will the staff, management committee and client agree with and support the intervention? Are they aware of what is being proposed? Would they support the intervention?

Using these points, QI team can consider each proposed/potential intervention. This process will help to determine which interventions will be most effective and should therefore be acted on first.

Following points would help in implementation of the action plan efficiently:

- Identify which problem(s) could be addressed by efforts of health institution itself and implement to address it.
- If additional support is needed to address those problems, identify those which could be addressed by management committee/ward committee or municipality, and include in action plan accordingly.
- In order to implement interventions, prepare action plan jointly engaging all the providers and other staff and determine which interventions are quick fixes (which could be done immediately), mid-term (would take some time) and long-term (would take lot of time).

Prepare Action Plan (as per Quality Improvement Action Plan Form)

After selection of the intervention, prepare action plan jointly engaging providers and management committees of health institutions using Quality Improvement Action Plan Form. The action plan should include what are the gaps (problems), root cause(s), their solutions (interventions/activities), name and position of the responsible person and date (when to be done/completed).

Step 6: Implementation of Interventions (as per Quality Improvement Action Plan Form)

Implement interventions/activities as per the action plan in timely manner. If there is a need to get support from management committee or municipality, coordinate to get such support. If there is a need to send formal request (letter), do that.

This step is very important. Unless you implement intervention, there would not be any improvement of quality of health and family planning services.

Step 7: Monitoring and Evaluation of Progress Made

Monitoring and evaluation is an integral part of any programme. Each intervention has its own objective. It is also important to monitor or evaluate regularly whether interventions are being carried out or not. Whether it is being carried out timely or not.

In general, it is advised to monitor and evaluate by reviewing the progress made based on action plan in a monthly basis. During the review, it should be determined what interventions have been completed, what interventions have already been started but yet to be completed or what interventions are yet to be started. This should be recorded in column 'Implementation Status' of the Action Plan form. If some interventions have not been carried out, cause of this should be identified and action should be taken to address it.

In addition to implementation of the action plan, it is also important to look into whether the implementation of these activities helps improve the quality of health and family planning services as expected or not. It is important to monitor the programme periodically not only by staff themselves but also by head of the institution or higher-level authorities. Sometimes in spite of implementation of the activities, improvement in quality of care is not observed or achieved. In such cases, it is important to re-start the process from the very beginning and prepare the action plan based on that.

Formation of QI Committees

It is important to form Quality Improvement Committee and have a meeting regularly (e.g. quarterly or every month) to review the findings of assessments, prepare action plan and review the progress made. This would help understand whether the services being provided are as per the standards, protocols, guidelines or not and take actions accordingly. Following QI Committee has been formed in different levels of federal government system for effective implementation of the policy commitments made up to now and to support smooth operation of the activities relating to the quality improvement of health and family planning services at health facility level with a provision of regular supervision, monitoring and evaluation:

1. Federal Level: QI Steering Committee
2. Provincial Level: QI Technical Advisory Committee
3. Municipal Level: Municipal QI Committee
4. Health Institution Level: Hospital QI Committee and Health Facility QI Team

The GoN's implementation guideline on system for quality assurance and improvement of health services (second edition 2017/18) has further detailed the scope of work, members and frequency of the meetings. See details regarding the roles and responsibilities in National Policy on Health Care Services, 2007.

QUALITY IMPROVEMENT ACTION PLAN FORM

गुणस्तर सुधार कार्ययोजना फाराम

.....संघ (Federal) / प्रदेश (Province) / पालिका (Municipality)

स्वास्थ्य संस्थाको नाम :

स्वास्थ्य संस्थाको कोड नम्बर :

Name of the Health Institution)

Code no of health institution:

मिति=Date:

क्र.सं. (SN.)	समस्याहरू (मुख्य भिन्नता) (Problems-Gap)	मूलकारणहरू (Root Cause)	समाधानका उपायहरू (Solutions)	जिम्मेवार व्यक्तिको नाम (Name of the Responsible Person)	पूरा गर्ने मिति (Date of completion)	कार्यान्वयनको अवस्था (Implementation Status)
गुणस्तर सुधार टोली वा समिति (QI Committee) :	१..... २.....	३. ४..... ५.....		कार्यालय प्रमुखको दस्तखत (Head of Office) नाम.....		

CHAPTER 5

FAMILY PLANNING COMPLICATION MANAGEMENT SYSTEM

5.1 INTRODUCTION

A complication is an unexpected unwanted occurrence that is directly related to a procedure or method and requires management beyond what is considered normal. A complication may be immediate (occurring during or soon after completion of a procedure, example: uterine perforation) or delayed (example: wound infection, method failure— pregnancy).

5.2 HOW WILL IT HELP THE SERVICE PROVIDERS AND HEALTH SYSTEM

It helps the service providers and the health system by:

- Ensuring the efficient management of family planning related complications
- Supporting service providers, Municipality, Health Office, Provincial Health Directorate, Ministry of Social Development and Family Welfare Division, Department of Health Services/ Ministry of Health and Population in management of complications
- Maintaining accurate documentation
- Serving as the basis for reimbursement of complication funds
- Improving family planning service delivery system and training curriculum, and reduce number of complications

5.3 REFERENCE MANUALS AND GUIDELINES

Reference manuals on clinical guidelines for management of immediate and delayed complications are found in method-specific training manuals and other reference books published by the Government of Nepal (GoN) MoHP:

- Managing Emergencies in Family Planning Services in Nepal
- No-Scalpel Vasectomy Reference Manual
- Minilaparotomy Reference Manual
- Intrauterine Contraceptive Device Reference Manual
- Implants Reference Manual
- COFP/Counselling Reference Manual
- Reproductive Health Clinical Protocols for Medical Officers
- Reproductive Health Clinical Protocols for Paramedics
- Reproductive Health Clinical Protocols for Nurses and ANMs

5.4 PREVENTION AND MANAGEMENT OF COMPLICATIONS

- To reduce the number of complications, the physician/nurse-in-charge should regularly orient other staff to infection prevention practices, aseptic technique and review operating theatre management. Emergency preparedness should be reviewed and medications and equipment checked regularly to ensure that they are in functional condition.

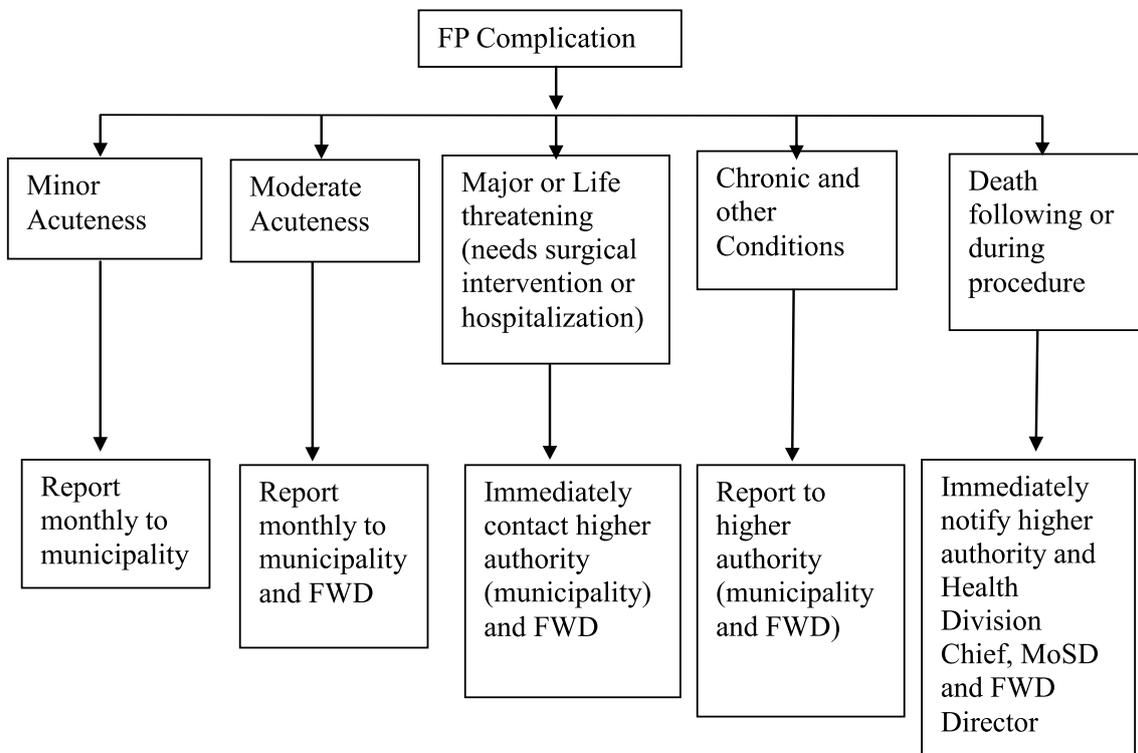
- All healthcare facilities (GoN, family planning private clinics, and NGO clinics) are to treat, stabilize and, if required, assist with referral/transfer.
- Staff will initiate clinical interventions immediately to the extent to which they are trained. If complication is beyond the scope of their expertise, staff will stabilize the client and coordinate transfer.
- Transfer to the facility that can appropriately and skillfully treat the complication, not necessarily to the closest higher facility.
- The client will be stabilized before transfer: Intravenous (IV) hydration, oxygen, control of bleeding, and whatever is vital and essential.
- A brief written summary of findings/interventions is to accompany the client.
- The concerned higher authority (Municipality, Health Office, Provincial Health Directorate, Ministry of Social Development and Family Welfare Division, Department of Health Services/Ministry of Health and Population) will be notified of the complication and will oversee and coordinate the management. The concerned higher authority (Municipality, Health Office, Provincial Health Directorate, Ministry of Social Development and Family Welfare Division, Department of Health Services/Ministry of Health and Population) will support service providers who are involved in an emergency and will make every effort to help coordinate care and to assure service provider safety. For detail see table 5-1.

Table 5-1: Complication Types and Complication Reporting System

Types	Example	Reporting System (See Figure 5-1 flow diagram)
(I) Minor Acuteness	<ul style="list-style-type: none"> • Wound separation • Minor wound infection • Minor complaints (headache, backache, fatigue) 	Every Minor Complication Report Form (Appendix G-II) filled by health facility and sent monthly to concerned higher authority (municipality).
(II) Moderate Acuteness	<ul style="list-style-type: none"> • Haematoma responding to conservative management • Minor drug reaction • Haemorrhage responding to conservative management 	Every Surgical Complication Report Form (Appendix G-I) completed by Health Facility and notified to concerned higher authority (municipality) and FWD as soon as possible.
(III) Major and/or Life Threatening: It needs surgical intervention or hospitalization	<ul style="list-style-type: none"> • Scrotal haematoma and/or abscess which needs drainage • Bowel, bladder, fallopian tube, or testis injury • Vaso-cutaneous fistula • Uterine perforation following IUCD • Sepsis, systemic infection peritonitis or tetanus • Severe haemorrhage • Large haematoma requiring I&D or blood transfusion • Gas/air embolism • Convulsions • Aspiration of vomitus • Allergic or anaphylactic reactions • Drug overdose/over-sedation • respiratory/cardiac depression or arrest 	Immediately contact concerned higher authority and FWD. In close coordination with concerned higher authority assist management and consult with FWD as needed. Surgical Complication Report Form (Appendix G-I) filled out by health facility and sent to FWD.

Types	Example	Reporting System (See Figure 5-1 flow diagram)
(IV) Chronic and Other Conditions	<ul style="list-style-type: none"> • Sterilization method failure • HBV, HCV, HIV • Impacted IUCD • Surgical removal of implant • Inability to complete procedure • Incorrect procedure (example: occlusion of ligamentum rotundum) • Chronic pain • Psychosomatic illness, regret following death of children • Spermatocele, fistula 	Notify concerned higher authority. Surgical Complication Report Form (Appendix G-I) completed by health facility and sent to concerned higher authority (municipality) and FWD. MoSD will assist health facility with arrangement of consultation and/or referral as needed.
(V) Death following or during procedure	<ul style="list-style-type: none"> • Any complication that is directly related to the family planning procedure or method and results in death 	Immediate notification to head of concerned higher authority and Health Division Chief of MoSD and FWD Director. Health facility fills Death Investigation Form (Appendix G-III).

Figure 5-1: Complication Reporting Flow Chart



Confidentiality

The content of a complication form is confidential. It is only discussed with persons directly involved in the management of the case and the Health Section of Municipality/Provincial Health Directorate Health Office/Family Welfare Division.

5.4.3 Recording and Reporting of Minor Complications

Minor complications (Acuteness I) are to be collected at the healthcare facilities providing the service.

- Health Coordinator or staff responsible of FP will collect the information concerning complications from the health facilities in a monthly basis.
- The Minor Complication Report Form is filled in duplicate: one form remains at the health facility and the other form is sent to the concerned authority.
- A summary of the findings from these forms will be sent from health facility to FHD.
- See Appendix G-II for a sample of the Minor Complication Report Form.

5.4.4 Recording and Reporting of Complication Form for Moderate and Major Complications, Chronic and Other Conditions

- The Surgical Complication Report Form is filled out by the health facility.
- The form is available in the NMS and is filled out in duplicate: one copy is forwarded to concerned higher authority; the other copy is forwarded to FWD along with accompanying paperwork:
 - Client summary sheet
 - Consent form (if applicable)
 - Prescriptions for medications
 - X-ray/test findings and fees
 - Procedures and lab tests
 - Receipts for treatment, supplies, medications
- Forms are to be submitted as soon as possible, without delay (i.e., immediately after resolution of the complication).
- See Appendix G-I for a sample of the Surgical Complication Report Form.

5.4.5 Recording and Reporting of Death Investigation Form (Type V –Table 5-1)

- The Health Facility is to notify to head of concerned authority, Health Division Chief of MoSD and FWD Director by phone about the client's death.
- The form is to be filled out by the Health Facility and sent to the concerned higher authority and FWD with accompanying documentation.
- FWD, Health Division Chief of MoSD is to assist the Health Facility in coordinating an investigation and, if required, consult with FWD and FWD will assist.
- A sample of the Death Investigation Form is in Appendix G-III.

5.4.6 Budgetary System

- Each MoSD and FWD receives funds to cover the expenses for treatment of all types of family planning complications. Costs related to management of complications are paid through the allocated budgets.
- All concerned authorities should submit all necessary documents to MoSD/FWD as mentioned in 5.4.4.

CHAPTER 6

NON-HORMONAL METHODS

MALE CONDOM

6.1 INTRODUCTION

Male condoms are sheaths, or coverings, that fit over a man's erect penis. Most male condoms are made of thin latex rubber while some are made of animal tissue (lamb caecum) or of polyurethane, polyisoprene and nitrile. However, this section describes male latex condoms.

6.1.1 Male Condoms Available in Nepal

Male condoms are widely available in Nepal. Condoms are freely available in all government health facilities from health post to tertiary hospitals. There are male condoms with different brand names available for purchase in private clinics, pharmacies and general retail stores.

6.1.2 Effectiveness

Contraceptive effectiveness depends upon the way it is used. The effectiveness is different for consistent and correct user, and common user. For consistent and correct user, in the first year of use it is 2 pregnancies per 100 women and for common user it is 13 pregnancies per 100 women.

Protection against unintended pregnancy, STI and HIV

- The male condom works by forming a barrier that keeps the sperms out of the vagina, preventing pregnancy. Also prevents transmission of infections of male and female reproductive organ to each other.
- When used consistently and correctly, male condom use prevents 80% to 95% of HIV transmission that would have occurred without condoms.
- Male condoms protect against STIs spread by discharge when used consistently and correctly during vaginal or anal sex.

6.1.3 Return of Fertility

When the user stops using male condoms, fertility returns instantly.

6.2 PREREQUISITES

6.2.1 Facilities

It is not necessary to have a special facility for distribution of male condoms, but it is important to have a place to do counselling and demonstration of use.

For distribution mechanism such as condom box could be used.

6.2.2 Distribution of Condom

Providers do not need specific training on male condom for its distribution. Condoms are available for people as needed without consulting with health service provider. It is distributed by health workers including FCHVs from government sector and also some non-governmental organization health workers distribute male condom.

6.2.3 Recording Keeping and Reporting

Formal registration is not required for obtaining male condoms. However, the health facility or health worker can maintain a register for recording the numbers distributed.

6.3 SERVICE DELIVERY

KEY POINTS FOR PROVIDERS AND CLIENTS

- Male condoms help protect against sexually transmitted infections, including HIV. Condoms are the only contraceptive method that can protect against both pregnancy and sexually transmitted infection.
- Require correct use with every act of sex for greatest effectiveness.
- Require both male and female partner's cooperation.
- Talking about condom use with partner before sex can improve the chances that one will be used.

6.3.1 Counselling And Informed Choice (For more detail, refer to Chapter One: Counselling and Informed Choice):

- Male condom clients should receive appropriate counselling for selecting and using the method, whenever possible and convenient for them. Counselling helps to ensure informed choice, proper condom use, and set the environment for couple counselling. However, counselling should not be a prerequisite for providing condoms.
- As with female clients, counselling to male clients should include information on reproduction, sexuality and contraception, and should involve the use of flipcharts and anatomic models. Misconceptions about methods should be clarified.
- Male condoms should be demonstrated using an anatomic model, not just verbally explained or handed out. Instructions for condom use should be made easily available in Health Institutions.
- Couple counselling is to be encouraged.

6.3.2 Eligibility

All men can safely use male condoms except those with severe allergic reaction to latex rubber.

Indication

Male condom is particularly appropriate for the following clients:

- A male partner who wishes to take responsibility for contraception.
- A client who needs or desires protection against STIs, including HIV transmission and unwanted pregnancy.
- A client who is worried about side effects of other methods.
- A client who needs a temporary, alternative or backup to another method (e.g., for the backup following vasectomy, if a woman forgets to take her COCs for 3 or more days).

Precautions

Allergy to latex rubber in either man or woman.

6.3.4 Procedure of Condom Use

- Use a new condom for each act of sex. Check condom package for expiry date, any damage or tear. Open it carefully.
- Before any physical contact, compress the tip of the condom between the fingers and thumb, place the condom on the tip of the erect penis with the rolled side out. Make sure there is no air in the tip of the condom.
- Unroll the condom all the way to the base of the erect penis.
- Immediately after ejaculation, hold the rim of the condom in place and withdraw the penis while it is still erect.
- Take out the condom from the penis and check whether the condom is intact or not before throwing it away. If the condom tears or comes off in the vagina, use emergency contraception (refer to Chapter 18: Emergency Contraception).
- Dispose the used condom safely.

Refer to the COFP/Counselling Reference Manual for details of condom use.

WHAT CONDOM USER SHOULD NOT DO

Some practices can increase the risk that the condom will break and should be avoided.

- Do not unroll the condom first and then try to put it on the penis
- Do not use lubricants with an oil base because they damage latex
- Do not use a condom if the colour is uneven or changed
- Do not use a condom that feels brittle, dried out or very sticky
- Do not reuse condoms
- Do not have dry sex
- Also, do not use the same condom between switching different penetrative sex acts, such as from anal to vaginal sex. This can transfer bacteria that can cause infection.

Explain about emergency contraception (EC)

Explain EC use in case of errors in condom use—including not using a condom—to help prevent pregnancy.

LUBRICANTS FOR LATEX CONDOMS

Lubrication helps encourage condom use and avoid condom breakage. There are 3 ways to provide lubrication—natural vaginal secretions, adding a lubricant safe for use with condoms, or using condoms packaged with lubricant on them. Clean water and saliva can be used for lubrication. The lubricants packaged with condoms are usually made of silicone. Silicone lubricants are also packaged separately.

Lubricants made with water or glycol also are available and may be less expensive. They, too, are safe to use with condoms. Lubricants should be applied on the outside of the condom, in the vagina, or in the anus.

Lubricants should not be put on the penis, as this can make the condom slip off. A drop or two of lubricant on the inside of the tip of the condom before it is unrolled can help increase the sensation of sex for some men. Too much lubricant inside, however, can make the condom slip off. Do not use products made with oil as lubricants for latex condoms. They can damage latex.

Materials that should not be used with latex condoms include:

- any oils (cooking, baby, coconut, mineral) or products made with oil
- petroleum jelly
- lotions
- cold creams
- butter
- cocoa butter
- margarine

6.4 MANAGING PROBLEMS ASSOCIATED WITH MALE CONDOM USE

Problems with condoms affect client satisfaction and use of the method. They deserve the provider's attention. If the client reports any problems, listen to the client concerns and give advice. Offer to help the client choose another method unless condoms are needed for protection from unintended pregnancy, STIs, including HIV.

Table 6-1: Problems Associated with Male Condom Use and Their Management

Problems	Solution/Management
Condom breaks, slips off the penis, or is not used (<2%)	<ul style="list-style-type: none"> • ECPs can help prevent pregnancy in such cases. • Little can be done to reduce the risk of STIs if a client reports breaks or slips: • Ask clients to show how they are opening the condom package and putting the condom on, using a model or other item. Correct any errors. • Ask if any lubricants are being used. The wrong lubricant or too little lubricant can increase breakage. Too much lubricant can cause the condom to slip off. • Ask when the man withdraws his penis. Waiting too long to withdraw, when the erection begins to subside, can increase the chance of slips.
Difficulty putting on condom	<ul style="list-style-type: none"> • Ask clients to show how they put the condom on, using a model or other item. Correct any errors.
Difficulty persuading partner to use condoms or not able to use a condom every time	<ul style="list-style-type: none"> • Discuss ways to talk about condoms with partner and also dual protection rationales. • Consider combining condoms with another effective contraceptive method for better pregnancy protection. • If the client or partner is at risk for STIs, encourage continued condom use.

Mild irritation in or around the vagina or penis or mild allergic reaction to condom (itching, redness, rash and/or swelling of genitals, groin or thighs during or after condom use)	<ul style="list-style-type: none"> • Tell the client to stop using latex condoms. Client can use condom made by material other than latex. • Suggest consultation with health worker for alternatives.
Female partner is using local applicants or vaginal medicines (for treatment of vulva/vaginal infection)	<ul style="list-style-type: none"> • A woman should not rely on latex condoms during vulval / vaginal use of local applicants or vaginal medicines. They can damage latex. (Oral treatment will not harm condoms.) • Abstain from penetrating sex until treatment is completed.
Severe allergic reactions to condom (hives or rash, dizziness, difficulty breathing, or loss of consciousness during or after condom use)	<ul style="list-style-type: none"> • Tell the client to stop using latex condoms. • Refer for care, severe allergic reaction to latex could lead to life-threatening anaphylactic shock. Help the client choose another method. • If the client or partner cannot avoid risk of STIs, suggest the use of female or male condom other than made by latex material if available.
Condoms reduce pleasure, myth/misconception	<ul style="list-style-type: none"> • Explain that condoms do not reduce pleasure, there are many different types to choose from and may even enhance pleasure for the couple. Condoms also provide peace of mind as the couples are now protected from both STIs and pregnancy.

FEMALE CONDOMS

6.5 INTRODUCTION

Female condom is a sheath, or lining, that fits loosely inside a woman's vagina, made of thin, transparent, soft film. It has flexible rings on both ends. One ring at the closed end helps to insert the condom. The ring at the open end holds part of the condom outside the vagina. It is made of various materials, such as latex, polyurethane, and nitrile. It lubricates with a silicone-based lubricant on the inside and outside. It works by forming a barrier that keeps sperm out of the vagina, preventing pregnancy, STIs and HIV. It also prevents transmission of infections of male and female reproductive organ to each other.

6.5.1 Female Condoms Available in Nepal

Female condoms are available with different brand names in the private clinics, pharmacies and few NGOs in Nepal.

6.5.2 Effectiveness

Contraceptive effectiveness depends upon the way it is used. The effectiveness is different for consistent and correct user, and common user. For consistent and correct user, in the first year of use it is 5 pregnancies per 100 women and for common user it is 21 pregnancies per 100 women.

Protection against unwanted pregnancy, STIs and HIV

- Female condoms reduce the risk of unwanted pregnancy, infection with STIs, including HIV, when used correctly with every act of sex.

6.5.3 Return of Fertility

When the user stops using female condoms, fertility returns instantly.

6.6 PREREQUISITES

6.6.1 Facilities and Provider

It is not necessary to have a special facility for distribution of female condoms, but it is important to have a place to do counselling and demonstration of use. Providers do not need specific training on female condom for its distribution.

6.7 SERVICE DELIVERY

KEY POINTS FOR PROVIDERS AND CLIENTS

- Female condoms help protect against unintended pregnancy, sexually transmitted infections, including HIV. Condoms are the only contraceptive method that can protect against both pregnancy and sexually transmitted infections.
- Require correct use with every act of sex for greatest effectiveness.
- A woman can initiate female condom use, but the method requires her partner's cooperation.
- Female must practice on application of female condom in model. May require some practice. Inserting and removing the female condom from the vagina becomes easier with experience.

6.7.1 COUNSELLING AND INFORMED CHOICE (For more detail, refer to Chapter One: Counselling and Informed Choice.)

- Female condom clients should receive appropriate counselling for selecting and using the method, whenever possible and convenient for them. Counselling helps to ensure informed choice, proper condom use, and set the environment for couple counselling. However, counselling should not be a prerequisite for providing condoms.
- Counselling should include information on reproduction, sexuality, STI/HIV and contraception, and should involve the use of flipcharts and anatomic models. Misconceptions about methods should be clarified.
- Female condom use should be demonstrated using an anatomic model, not just verbally explained or handed out. Instructions for condom use should be made easily available in Health Institutions, and all the available sites.

6.7.2 Eligibility for Female Condom

All females can safely use female condoms except those with severe allergic reaction to latex rubber.

Indication: Particularly appropriate for the following clients:

- A female partner who chooses condom as her method of choice for family planning.
- A client who needs or desires protection against STIs, including HIV transmission and unwanted pregnancy.
- A client who is worried about side effects of other methods.
- A client who needs a temporary alternative or backup to another method (e.g., for the backup when a woman forgets to take her COCs for 3 or more days).

6.7.3 Client Instructions and Follow-up

Instructions should be given to anyone coming to the Health Institution for condoms for the first time. Demonstrate condom application on the model.

6.7.4 Procedure of Female Condom Use

IMPORTANT: Show the client how to insert the female condom using model or picture, and hands to demonstrate. You can create an opening similar to a vagina with one hand and show how to insert the female condom with the other hand.

1. Use a new female condom for each act of sex

- Check the condom package. Do not use if torn or damaged. Avoid using a condom past the expiry date.
- Wash your hands with mild soap and clean water before inserting the condom.

2. Before any physical contact, insert the condom into the vagina

- Can be inserted up to 8 hours before sex. Insert female condom before the penis comes in contact with the vagina.
- Choose a position that is comfortable for insertion—squat, raise one leg, sit, or lie down.
- Rub the sides of the female condom together to spread the lubricant evenly.
- Grasp the ring at the closed end, and squeeze it so it becomes long and narrow.
- With the other hand, separate the outer lips (labia) and locate the opening of the vagina.
- Gently push the inner ring into the vagina as far up as it will go. Insert a finger into the condom to push it into place. About 2 to 3 centimeters of the condom and the outer ring remain outside the vagina.

3. Ensure that the penis enters the condom and stays inside the condom

- The man or woman should carefully guide the tip of his penis inside the condom—not between the condom and the wall of the vagina. If his penis goes outside the condom, withdraw and try again.
- If the condom is accidentally pulled out of the vagina or pushed into it during sex, put the condom back in place.

4. After the man withdraws his penis, hold the outer ring of the condom, twist to seal in fluids, and gently pull it out of the vagina

- The female condom does not need to be removed immediately after sex.
- Remove the condom before standing up, to avoid spilling semen.
- If the couple has sex again, they should use a new condom.
- Reuse of female condoms is not recommended.

5. Dispose of the used condom safely

- Wrap the condom in its package and put it in the rubbish. Do not put the condom into a flush toilet, as it can cause problems with plumbing.

Supporting the User

Ensure the client understands correct use

- Ask the client to explain the 5 basic steps of using the female condom while handling one.
- Provide a model, where the client can practice inserting the condom in the model and then taking it out.

Explain why using a condom with every act of sex is important

- Just one unprotected act of sex can lead to pregnancy or STI/HIV—or both.
- If a condom is not used for one act of sex, try to use one the next time. A mistake once or twice does not mean that it is pointless to use condoms in the future.

Explain about emergency contraception (EC)

- Explain EC use in case of errors in condom use—including not using a condom or any other FP method—to help prevent pregnancy.

6.8 MANAGING PROBLEMS ASSOCIATED WITH FEMALE CONDOM USE

Problems with condoms affect clients' satisfaction and use of the method. They deserve the provider's attention. If the client reports any problems, listen to the client's concerns and give advice. Offer to help the client choose another method unless condoms are needed for protection from STIs, including HIV.

Table 6-2: Problems Associated with Female Condom Use and Their Management

Problems	Solutions/Management
Difficulty inserting the female condom	<ul style="list-style-type: none"> • Ask the client how she inserts a female condom. Ask her to demonstrate insertion of female condom in model and let her practice with the model. Re-ensure by asking her to demonstrate using her hands. Correct any errors.
Inner ring uncomfortable or painful	<ul style="list-style-type: none"> • Suggest that she reinsert or reposition the condom so that the inner ring is tucked back behind the pubic bone and out of the way.
Condom squeaks or makes noise during sex	<ul style="list-style-type: none"> • Make sure there is audio privacy while having sex.

Condom slips, is not used, or is used incorrectly	<ul style="list-style-type: none"> • ECPs can help prevent pregnancy (see chapter on Emergency Contraception). • Little can be done to reduce the risk of STIs if a condom breaks, slips, or is not used. If the client has signs or symptoms of STIs after having unprotected sex, assess or refer. • If a client reports slips, she may be inserting the female condom incorrectly. Ask her to show how she is inserting the condom, using a model or demonstrating with her hands. Correct any errors.
Difficulty persuading partner to use condoms or not able to use a condom every time	<ul style="list-style-type: none"> • Discuss ways to talk with her partner about the importance of condom use for protection from pregnancy and STIs.
Mild irritation in or around the vagina or penis (itching, redness, or rash)	<ul style="list-style-type: none"> • Usually goes away on its own without treatment. • If symptoms persist, assess and treat for possible vaginal infection or STI, as appropriate. • If there is no infection, help the client choose another method unless the client is at risk for STIs, including HIV. • For clients at risk of STIs, including HIV, suggest using male condoms made of different material than that used in female condom.
Suspected pregnancy	<ul style="list-style-type: none"> • Assess for pregnancy. • A woman can safely use female condoms during pregnancy for continued STI protection.

FERTILITY AWARENESS METHOD (FAM)

6.9 INTRODUCTION

A couple/partners voluntarily avoid/s sexual intercourse during the fertile days of the woman's cycle (time when the woman can become pregnant) or has intercourse during the fertile days to achieve pregnancy (see menstrual cycle – appendix H).

Fertility Awareness (FA) helps women to know and tell when the fertile time of her menstrual cycle starts and ends.

Fertility Awareness is an actionable information about female and male fertility throughout the life course and an understanding of how this knowledge applies to one's own circumstances and needs.

It includes basic information about the menstrual cycle, when and how pregnancy occurs, the likelihood of pregnancy from unprotected sexual intercourse at different times during the menstrual cycle and at different life stages, and the role of male fertility. FA also includes information on family planning (FP) methods, how specific method works, how to use them and how they affect fertility. Better and effective communication is the heart and soul of both fertility awareness and FAM.

6.9.1 Types of Fertility Awareness Methods

The cervical mucus method monitors the quality and quantity of cervical mucus at the vaginal opening.

- Fertile mucus occurs approximately mid-cycle and is abundant, thin, slippery and elastic, like an egg white.
- Infertile mucus is thick, sticky and scant and is found at the beginning and end of the cycle.
- Abstinence is practiced when fertile mucus is present.
- **TwoDay Method¹⁸ is based on identifying the fertile days of a woman's menstrual cycle.**
- It requires a woman to monitor each day the presence or absence of cervical secretions to determine if she can get pregnant today. Women are instructed to monitor/check their secretions each afternoon and evening, either by sensation or by observation.
- The woman asks herself two simple questions: (1) *Did I note any secretions today?* and (2) *Did I note any secretions yesterday?* If she notes secretions either today or yesterday, pregnancy is likely today. She is advised to avoid unprotected intercourse if she wishes to prevent a pregnancy. If she does not note secretions on both days, pregnancy is not likely today.
- TwoDay Method is a promising new approach that does not require having regular menstrual cycles.

Important: If woman has a vaginal infection or another condition that changes cervical mucus, the TwoDay Method will be difficult to use.

The basal body temperature method monitors the resting body temperature each day.

- Just at or immediately after ovulation (mid-cycle), there is 0.3–0.5° rise in body temperature.
- Abstinence is practiced from the beginning of the cycle until 3 days after the rise in body temperature.

The sympto-thermal method combines observation of cervical mucus and monitoring of the basal body temperature in order to more accurately pinpoint the fertile period.

The calendar method uses a mathematical formula to calculate the fertile period. The woman first must observe the length of at least six menstrual cycles and then apply the formula to these observations.

Lactational Amenorrhea Method (LAM) is based on the natural post-partum infertility that occurs when woman breastfeeds exclusively, baby is less than six months and menstruation has not resumed.

Standard Days Method (SDM) – Malachakra identifies cycle days 8–19 as fertile. It helps couple/partners avoid unprotected pregnancy by knowing which days they should not have unprotected sex.

6.9.2 Effectiveness

Contraceptive effectiveness depends upon the way it is used. The effectiveness is different for consistent and correct user, and common user. For consistent and correct user, in the first year

18 http://irh.org/projects/fam_project/twoday-method/

of use it varies from 5 pregnancies per 100 women and for common user it may be up to 12 pregnancies per 100 women. Pregnancy rates vary for different types of fertility awareness methods. Following table provides the details:

Effectiveness Fertility Awareness-based Method (based on life table-based analysis)

Table 6-3: Percentage of unintended pregnancy within one year of use

Method	Percentage of unintended pregnancy within one year of use	
	Typical use	Perfect use
Calendar		
• Calendar Rhythm	25	0.1-9
Standard Days Method	12	4.8
Basal Body Temperature (BBT)	-	1
Cervical mucus		
• TwoDays (TDM)	13.7	3.5
• Billing Ovulation	10.5-22.3	0.5
• Creighton Method	17.1	0.5
Sympto-thermal	0.2-20	0.3
LAM	-	2

Source: *J Am Board Fam Med.* 2009 Mar-Apr;22(2):147-57

6.9.3 SERVICE DELIVERY

6.9.3.1 Eligibility

Indications

Fertility Awareness method of family planning may be an appropriate method for:

- Highly motivated couples/partners willing to undergo extensive abstinence as well as observing, recording and interpreting fertility signs
- Women who have a regular menstrual cycle
- Couples who wish to avoid pregnancy without using mechanical or pharmacological contraceptives
- Couples for whom other more effective methods are contraindicated or cannot be used
- Couples with religious/cultural prescription against other methods
- Couples who can tolerate a high failure rate
- Not appropriate for adolescents until cycle is regular

Table 6-4: Providing Calendar Rhythm Method

Keep track of the days of the menstrual cycle	Before relying on this method, a woman records the number of days in each menstrual cycle for at least 6 months. The first day of monthly bleeding is always counted as day 1.
Estimate the fertile time	The woman subtracts 18 from the length of her shortest recorded cycle. This tells her the estimated first day of her fertile time. Then she subtracts 11 days from the length of her longest recorded cycle. This tells her the estimated last day of her fertile time.
Avoid unprotected sex during fertile time	The couple avoids vaginal sex, or uses condoms or a diaphragm, during the fertile time. They can also use withdrawal or spermicides, but these are less effective.
Update calculations monthly	She updates these calculations each month, always using the 6 most recent cycles. Example: <ul style="list-style-type: none"> • If the shortest of her last 6 cycles was 27 days, $27 - 18 = 9$. She starts avoiding unprotected sex on day 9. • If the longest of her last 6 cycles was 31 days, $31 - 11 = 20$. She can have unprotected sex again on day 21. • Thus, she must avoid unprotected sex from day 9 through day 20 of her cycle.

6.9.3.2 When to start

Once well counselled, couple/partners usually can begin using calendar-rhythm method at any time. Give clients who cannot start immediately another method to use until they can start.

Table 6-5: Starting Calendar Rhythm Method

Women's Situation	When to start
Having regular menstrual cycles	Any time of the month No need to wait until the start of next monthly bleeding.
No monthly bleeding	Delay calendar-rhythm method until monthly bleeding returns.
After childbirth (whether or not breastfeeding)	Delay Standard Day Method until she has 4 menstruation cycles and the last one was 26-32 days long. Regular cycles will return later in breastfeeding women than in women who are not breastfeeding.
After miscarriage or abortion	Delay the Standard Days Method until the start of her next monthly bleeding, when she can start if she has no bleeding due to injury to the genital tract.
Switching from a hormonal method	Delay starting method until the start of her next monthly bleeding. If she is switching from injectable, delay the Standard Days Method at least until her repeat injection would have been given, and then start it at the beginning of her next monthly bleeding.
After taking emergency contraceptive pills	Delay the Standard Days Method until the start of her next monthly bleeding.

STANDARD DAYS METHOD - MALACHAKRA

6.10 INTRODUCTION

Standard Days Method (SDM) - Malachakra - is the knowledge of the days in a woman's menstrual cycle when she is likely to become pregnant (fertile days). It simplifies the identification of those days by using scientific data to set a fixed fertile window. Most women—those who have menstrual cycles between 26 and 32 days long - consider days 8 through 19 as the fertile days of the cycle. It requires cooperation of both members of the couple. If the couples want pregnancy then they would time their sexual intercourse during the fertile period.

6.10.1 Medical Eligibility Criteria

The World Health Organization's Medical Eligibility for Contraceptive Use states that the SDM, like other fertility awareness-based methods, poses no adverse risk to women who choose to use it. But the SDM is intended for women who meet certain criteria:

- The majority of her cycles should be between 26 and 32 days. If a woman does not know the approximate length of her menstrual cycles, this can be determined by a few simple questions to assess cycle length and regularity:
 - Do you get your periods about once a month?
 - Do you get your periods when you expect them?
 - When did your last period start?
- If she has more than one long or short cycle within a year, the SDM will be less effective and she should be encouraged to choose and use another contraceptive method.
- Women who know when their last period started can **use SDM-Malachakra right away.**

6.10.2 When to start SDM-Malachakra

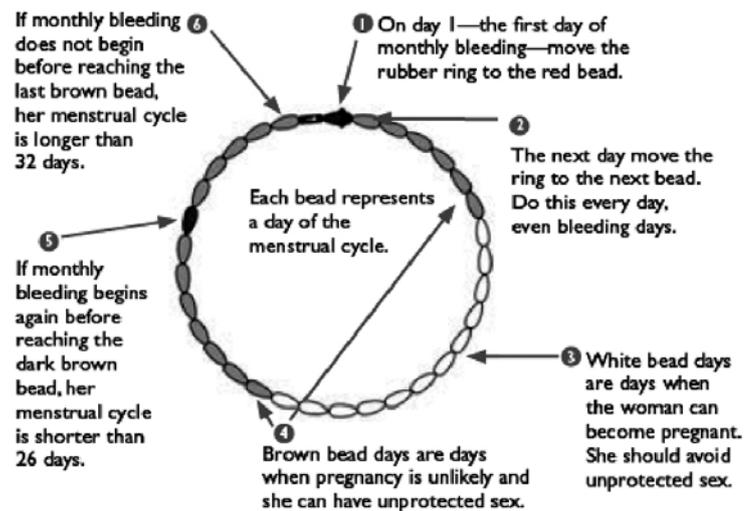
Women who do not know their last period can **begin SDM-Malachakra when their next period starts.** Special circumstances that affect eligibility are: recent hormonal contraceptive use, and a recent pregnancy.

Table 6-6: When to start SDM-Malachakra

Date of the last period known	Start immediately
Date of the last period unknown	Start on first day of next period
Postpartum/breastfeeding	Wait until she has 4 periods and the two most recent are about a month apart
3 monthly-Contraceptive Injection	Wait 90 days after injection and last three periods have been about a month apart
Pill, implant, IUCD	Pills and implant: Wait until last 3 periods are about a month apart (after stopping the hormonal method) IUCD: Wait until last 2 periods are about a month apart
Had a miscarriage or abortion in the past month or used emergency contraception	Start Malachakra on the first day of her next period (if her periods were about a month apart before she got pregnant or used emergency contraception)

Table 6-7: Instruction to Clients for SDM-Malachakra

Keep track of the days of the menstrual cycle	A woman keeps track of the days of her menstrual cycle, when she is fertile, monitors cycle length and shares information with her partner, moving the ring on first red bead of Malachakra.
Avoid unprotected sex on days 8–19	<ul style="list-style-type: none"> • Days 8 through 19 of every cycle are considered fertile days for all users of the Standard Days Method-Malachakra. • The couple/partner avoids vaginal sex or uses condoms or a diaphragm during days 8 through 19. They can also use withdrawal or spermicides, but these are less effective. • The couple/partner can have unprotected sex on all the other days of the cycle—days 1 through 7 at the beginning of the cycle and from day 20 until her next monthly bleeding begins.
Use memory aids if needed	The couple/partners can use Malachakra, a color-coded string of beads that indicates fertile and no fertile days of a cycle (see diagram below), or other like mobile app called Malachakra app and DOTs, they can mark a calendar.



Refer to the COFP/Counselling Reference Manual for details of Malachakra regarding its use, advantages & disadvantages, counselling, screening and follow up.

COITUS INTERRUPTUS (WITHDRAWAL)

6.11 INTRODUCTION

Withdrawal is a traditional family planning method in which the man completely removes his penis from the woman's vagina before he ejaculates and ejaculates outside of vagina, keeping his semen away from her external genitalia.

6.11.1 Effectiveness

Contraceptive effectiveness depends upon the way it is used. The effectiveness is different for consistent and correct user, and common user. This is one of the least effective methods, as commonly used. For consistent and correct user, in the first year of use it is 4 pregnancies per 100 women and for common user it is 20 pregnancies per 100 women.

6.12 SERVICE DELIVERY

6.12.1 Eligibility

Indications

- Couples who can communicate well during intercourse
- Disciplined men who can ignore urge to continue with intercourse
- Couples with cultural/religious prescriptions against other methods
- Couples who can tolerate high failure rate
- Adolescents: not recommended due to low compliance

6.12.2 Client Instructions and Follow-up

Following client instruction should be provided to client regarding use of withdrawal method.

- **When the man feels close to ejaculating:** He should withdraw his penis from the woman's vagina and ejaculate outside the vagina, keeping his semen away from her external genitalia.
- **If the man has ejaculated recently:** Before sex he should urinate and wipe the tip of his penis to remove any semen remaining.
- **Learning proper use can take time:** Suggest the couple also use another method until the man feels that he can use withdrawal correctly with every act of sex.
- **Greater protection from pregnancy is available:** Suggest an additional or alternative family planning method. (Couples who have been using withdrawal effectively should not be discouraged from continuing.)
- **Some men may have difficulty using withdrawal:** Men who cannot sense consistently when ejaculation is about to occur and men who ejaculate prematurely.
- Practice withdrawal using backup method until both partners master withdrawal.
- Use emergency contraception if ejaculation occurs prior to withdrawal.

REMEMBER

- Coitus interruptus does not eliminate the risk of STIs: pre-ejaculation can contain HIV-infected cells, and lesions or ulcers on the genitals can transmit infections.
- Although popularly considered an effective method, coitus interruptus provides efficacy similar to that of barrier methods of contraception.

**SECTION II: METHOD SPECIFIC
CONTRACEPTION**

CHAPTER 7

COMBINED ORAL CONTRACEPTIVE PILLS (COCS)

7.1 INTRODUCTION

7.1.1 COCs Available in Nepal

Combined Oral Contraceptives (COC) are pills that contain low doses of 2 hormones – a progestin and an estrogen - like the natural hormones progesterone and estrogen in a woman’s body.

In Nepal, the most common COCs available are “Nilocon White” and “Sunaulo Gulaf”. They are combined low dose pills in 28-day packages. COCs are available at all GoN facilities, and contain norgestrel (progestin) 0.3 mg and ethinyl estradiol (estrogen) 0.03mg in each pill. The last 7 brown pills contain 75mg ferrous fumarate (iron). They are available throughout the country in medical shops through social marketing.

7.1.2 Effectiveness

- Consistent and correct use: 0.3 pregnancies/100 women in first year of use
- Common use: 7 pregnancies/100 women in first year of use

7.1.3 Return of Fertility

When the woman stops taking the pill, her fertility will return to normal relatively quickly, although it may not be immediate. If a woman does not resume normal cycles after stopping the pill, a specific cause other than pill use should be sought.

7.2 PREREQUISITES

7.2.1 Facilities

Minimum facilities for providing oral contraceptive services are:

- A place to register and counsel and
- Examine the client

7.2.2 Supplies

- First supply for 3-months
- Re-supply for 3- to 6-months

7.2.3 Category of Provider/Training

The COC pills can be provided by any health worker who can explain pill use and manage minor side effects, and explain alternative methods of contraception using RH Protocol (Family Planning-COC). Beyond the health institutions (PHCC, CHU, PHC-ORC), pills may be re-supplied by the FCHVs. They can be also purchased from private pharmacies.

7.2.4 Record Keeping and Reporting

The provider should fill the following forms before and after providing COCs:

- Master Register (HMIS No. 1.1) Appendix A (I)
- Health Service Card (HMIS No. 1.2) Appendix A (II)
- Referral / Transfer Card (HMIS 1.4) Appendix A (III)
- Face Sheet (HMIS No. 3.1) Appendix A (V)
- Pills (HMIS 3.2) Appendix A (VI)

The provider should ensure that the medical record forms are completed, regularly maintained and reported to the Municipality or Health Office in the district.

7.3 SERVICE DELIVERY

7.3.1 Counselling and Informed Choice (For more detailed information refer to Chapter One: Counselling and Informed Choice.)

All COC clients must receive appropriate counselling for selecting and using the methods. We should encourage clients to ask their questions so that any uncertainties and misunderstandings can be cleared up. Before selection of FP method service provider should provide counselling on:

- Advantages and disadvantages.
- The possibility of change in menstrual bleeding patterns, including amenorrhoea and menstrual irregularity.
- Alternative family planning methods, including information on effectiveness, risks and benefits, side effects and cost, as appropriate.
- Timing of taking pills.
- Return of fertility.

7.3.2 Eligibility

Indications

COCs should be provided to any woman who is eligible after receiving appropriate counselling with an informed decision. Women who have any contraindications should not be provided with COCs.

In general, COC is safe and suitable for nearly all women. COCs may be particularly appropriate for those who:

- Want a highly effective method of contraception
- Are motivated and willing to use a method which requires action daily, and will be able to obtain supplies on a continuous basis
- Have or do not have child, married or single and after abortion

Women may be benefitted from one or more of the ancillary protective health effects of COC use. This includes women who have:

- Anaemia now or in the past
- A history of ectopic pregnancy
- Painful menstrual periods, ovulation pain

- Recurrent benign ovarian cysts
- A history of, or are at risk of, acute pelvic inflammatory disease (PID)
- Family history of ovarian cancer
- Symptoms of endometriosis.

7.3.3 Clinical Assessment

In Nepal, COCs are available without medical supervision because their health benefits far exceed their health risk. However, women who obtain their pills from where screening is possible will be benefitted from a screening history and physical examination to rule out certain precautions such as:

- Known or suspected pregnancy
- Taking certain medications (rifampicin for tuberculosis and medications for mental disorders (e.g. epilepsy)
- Thromboembolic disorders (blood clots in the legs, lungs or eyes)
- Heavy smoker (if over 35 years of age)
- High blood pressure (systolic blood pressure between 140 and 159 mmHg or diastolic 90 and 99 mmHg or history of hypertension if blood pressure not taken)
- Active liver diseases (e.g. jaundice)

If none of these conditions are present, COCs may be given. If any of these conditions are suspected, the health care provider must carefully consider the risks and benefits of COC use for this particular client. Refer to Table 7-1 and 7-2 for MEC.

COMBINED ORAL CONTRACEPTIVES FOR WOMEN WITH HIV

- Women living with HIV or on antiretroviral (ARV) therapy can safely use COCs.
- Urge these women to use condoms along with COCs. If used consistently and correctly, condoms help prevent transmission of HIV and other STIs.

DUAL PROTECTION STRATEGY

Choosing a Dual Protection Strategy (see detail in Chapter 15-Contraception and STI including HIV.)

Every family planning client needs to think about preventing STIs, including HIV—even people who assume they face no risk. A provider can discuss what situations place a person at increased risk of STIs, including HIV and clients can think about whether these risky situations come up in their own lives. If so, they can consider 5 dual protection strategies.

Individual or couple might use different strategies in different situations.

Strategy 1: Use a male or female condom correctly with every act of sex.

Strategy 2: Use condoms consistently and correctly plus another family planning method.

Strategy 3: If both partners know they are not infected, use any family planning method to prevent pregnancy and stay in a mutually faithful relationship.

Strategy 4: Engage only in safer sexual intimacy that avoids intercourse or otherwise prevents semen and vaginal fluids from coming in contact with each other's genitals.

Strategy 5: Delay or avoid sexual activity (either avoiding sex any time that it might be risky or abstaining for a longer time).

People at high risk of HIV infection can take PrEP—pre-exposure prophylaxis. This daily treatment with oral antiretroviral drugs greatly reduces the chances of infection if exposed to HIV. PrEP can be a part of any dual protection strategy.

CONDITIONS COMBINED ORAL CONTRACEPTIVE COULD BE USED

WHO MEC Category 1: Use method in any circumstances

WHO MEC Category 2: Generally, use method

Table 7-1: Conditions COC could be used

Condition	Explanation of Condition	Medical Eligibility of COC
Pregnancy		Not applicable
Age	Menarche to < 40 years	1
	≥40 years	2
Parity	Nulliparous (has not given birth)	1
	Parous (has given birth)	1
Breast feeding	≥6 months post-partum	2
Post-partum (not breastfeeding)	21-42 days	2
	>42 days	1
Post-abortion	First trimester	1
	Second trimester	1
	Immediate post-ectopic abortion	1
	Post-ectopic pregnancy	1
	History of pelvic surgery	1
Smoking	Age <35 years	2
Obesity	≥30 kg/m ² body mass index (BMI)	2
Blood pressure	In settings where pregnancy morbidity and mortality risks are high and this method is one of few widely available contraceptives, women should not be denied access simply because their blood pressure cannot be measured.	NA
	History of high blood pressure during pregnancy (where current blood pressure is measurable and normal)	2

Condition	Explanation of Condition	Medical Eligibility of COC
Deep venous thrombosis (DVT)/ Pulmonary embolism (PE)	Family history of DVT/PE (first-degree relatives)	2
Surgery	Major Surgery - without prolonged immobilization	2
	Minor Surgery - without prolonged immobilization	1
	Varicose veins	1
	Superficial venous thrombosis	2
Dyslipidemia	Known dyslipidemias without other known cardiovascular risk factors	2
Valvular heart disease	Uncomplicated	2
Systemic lupus erythematosus	Severe thrombocytopenia	2
	Immuno-suppressive treatment	2
Neurological conditions	Headaches – non-migrainous (mild or severe)	1 – for initiation 2 - for continuation
	Migraine – without aura, age <35 years	2 for initiation 3-for continuation
	Epilepsy (if taking anticonvulsants – see drug interaction MEC 3)	1
Depressive disorders	Certain medication may make it less effective such as tricyclics ¹⁹	1
Reproductive tract infection and disorders	Vaginal bleeding- irregular pattern without heavy bleeding	1
	Heavy or prolonged bleeding (including regular and irregular patterns)	1
	Unexplained vaginal bleeding (suspicious of serious condition) before evaluation	2
	Endometriosis	1
	Benign ovarian tumours (including cysts)	1
	Severe dysmenorrheal	1

Condition	Explanation of Condition	Medical Eligibility of COC	
Gestational trophoblastic disease	Decreasing or undetectable β -hCG levels	1	
	Persistently elevated β -hCG levels or malignant disease	1	
	Cervical ectropion	1	
	Cervical intraepithelial neoplasia (CIN)	1	
	Cervical cancer (awaiting treatment)	2	
Breast disease	Undiagnosed mass	2	
	Benign breast disease	1	
	Family history of cancer	1	
Endometrial cancer	This condition may make pregnancy an unacceptable health risk. Women should be advised less effective methods (withdrawal, fertility awareness methods, or female or male condoms may not be the most appropriate choice)	1	
Ovarian cancer	This condition may make pregnancy an unacceptable health risk. Women should be advised less effective methods (withdrawal, fertility awareness methods, or female or male condoms may not be the most appropriate choice)	1	
Uterine fibroid	Without distortion of the uterine cavity	1	
	With distortion of the uterine cavity	1	
Anatomic abnormalities	Distorted uterine cavity	-	
	Other abnormalities not distorting uterine cavity	-	
Pelvic inflammatory disease (PID)	Past PID (assuming no current risk factors for STIs)	with subsequent pregnancy	1
		without subsequent pregnancy	1
	Current PID	1	
Sexually transmitted infections (STIs)	Current purulent cervicitis, chlamydia, or gonorrhoea	1	
	Other STIs (excluding HIV and hepatitis)	1	
	Vaginitis (including trichomonas vaginalis and bacterial vaginosis)	1	
	Increased risk of STIs	1	

Condition	Explanation of Condition		Medical Eligibility of COC
HIV/AIDS	High risk of HIV		1
	Asymptomatic or mild HIV clinical disease (WHO stage 1 or 2)		1
	Severe or advanced HIV clinical disease (WHO stage 3 or 4)		1
	Antiretroviral therapy – treated with nucleoside reverse transcriptase inhibitors (NRTIs)		1
	Antiretroviral therapy – treated with non-nucleoside reverse transcriptase inhibitors (NNRTIs)	Efavirenz (EFV) or nevirapine (NVP)	2
		Etravirine (ETR) or rilpivirine (RPV)	1
	Treated with protease inhibitors (PIs)††		2
	Treated with integrase inhibitors (raltegravir [RAL])		1
Schistosomiasis	Uncomplicated		1
	Fibrosis of the liver (if severe, see cirrhosis - This condition may make pregnancy an unacceptable health risk. Women should be advised less effective methods (withdrawal, fertility awareness methods, or female or male condoms may not be the most appropriate choice)		1
Tuberculosis	Pelvic		1
	Non-pelvic		1
Malaria			1
Endocrine conditions	Diabetes	History of gestational diabetes	1
		Non-vascular – non-insulin dependent diabetes	2
		Non-vascular –insulin dependent diabetes (This condition may make pregnancy an unacceptable health risk. Women should be advised less effective methods such as withdrawal, fertility awareness methods, or female or male condoms may not be the most appropriate choice)	2
	Thyroid	Simple goitre	1
		Hyperthyroid	1
		Hypothyroid	1

Condition	Explanation of Condition		Medical Eligibility of COC
Gastrointestinal conditions	Gall bladder disease	Symptomatic – treated by cholecystectomy	2
		Asymptomatic	2
	History of cholestasis	Pregnancy related	2
	Viral hepatitis	Acute or flare	2 – continuation
		Carrier	1
		Chronic	1
	Cirrhosis	Mild (compensated)	1
Liver tumours	Focal nodular hyperplasia	2	
Anemias	Thalassemia		1
	Sickle cell anaemia	This condition may make pregnancy an unacceptable health risk. Women should be advised less effective methods (withdrawal, fertility awareness methods, or female or male condoms may not be the most appropriate choice)	2
	Iron-deficiency anaemia		1
Drug interaction	Antimicrobial therapy	Broad-spectrum antibiotics	1
		Antifungal and antiparasitic	1

PRECAUTIONS FOR THE USE OF COMBINED ORAL CONTRACEPTIVES

- **Has a suspected pregnancy by history, symptoms, or signs:**

Although there is no reported harm to the woman or foetus from the small amount of estrogen and progestin in low-dose COCs, no health risk is considered acceptable. It is unwise for a woman to take any drugs in early pregnancy.

- **Using Clinical Judgment in Special Cases**

Usually, a woman with any of the conditions listed below should not use COCs. In special circumstances, however, when other, more appropriate methods are not available or acceptable to her, a qualified provider who can carefully assess a specific woman's condition and situation may decide that she can use COCs. The provider needs to consider the severity of her condition and, for most conditions, whether she will have access to follow-up.

WHO MEC Category 3: Should not use unless other methods not available

WHO MEC Category 4: COC should not be used in following conditions

Table No 7-2: Condition COC should not be used

Condition	Explanation of Condition	Medical Eligibility of COC	
Breast feeding	<6 weeks post-partum	4	
	≥6 weeks to <6 weeks post-partum (primarily breast feeding)	3	
Post-partum (not breastfeeding)	<21 days	3	
	<21 days with other added VTE	4	
	21-42 days with other added VTE risk factors	3	
Smoking	Age ≥35 years <15 cigarettes/day	3	
	≥15 cigarettes/day	4	
Cardiovascular disease	Multiple risk factors for arterial cardiovascular disease (old age, smoking, diabetes and hypertension)	3/4 ²⁰	
Hypertension ²¹	History of hypertension, where blood pressure CANNOT be evaluated (including hypertension in pregnancy)	3	
	Adequately controlled hypertension, where blood pressure CAN be evaluated	3	
	Elevated blood pressure (properly measured)	Systolic 140–159 or diastolic 90–99	3
		Systolic > 160 or diastolic > 100 ²²	4
Vascular disease		4	
Deep venous thrombosis (DVT)/ Pulmonary embolism (PE)	History of DVT/PE	4	
	Acute DVT/PE	4	
	DVT/PE and an anticoagulant therapy	4	
Surgery	Major surgery with prolonged immobilization	4	

20 When multiple major risk factors exist, any of which alone would substantially increase the risk of cardiovascular disease, use of the method may increase her risk to an unacceptable level. However, a simple addition of categories for multiple risk factors is not intended. For example, a combination of factors assigned a category 2 may not necessarily warrant a higher category.

21 Assuming no other risk factors for cardiovascular disease exist. A single reading of blood pressure is not sufficient to classify a woman as hypertensive.

22 This condition may make pregnancy an unacceptable health risk. Women should be advised that because of relatively higher pregnancy rates, as commonly used, spermicides, withdrawal, fertility awareness methods, cervical caps, diaphragms, or female or male condoms may not be the most appropriate choice.

Condition	Explanation of Condition	Medical Eligibility of COC
Known thrombogenic mutations (e.g. factor V leiden, prothrombin mutation, protein S, protein C and antithrombin deficiency)		4
Ischemic heart disease ²²	Current	4
	History of IHD	4
	Stroke (history of cerebrovascular accident)	4
Valvular heart disease	Complicated - This condition may make pregnancy an unacceptable health risk. Women should be advised less effective methods (withdrawal, fertility awareness methods, or female or male condoms may not be the most appropriate choice)	4
Systemic lupus erythematosus	Positive (or unknown) antiphospholipid antibodies	4
Neurological conditions	Migraine – without aura, age <35 years	3 (continuation)
	Migraine – without aura, age ≥35 years	3 (initiation), 4 (continuation)
	Migraine – with aura, at any age	4
Reproductive tract infection and disorders	Breast cancer Current - This condition may make pregnancy an unacceptable health risk. Women should be advised less effective methods (withdrawal, fertility awareness methods, or female or male condoms may not be the most appropriate choice)	4
	Past, no evidence of disease for at least 5 years	3
Endocrine conditions	Diabetes with kidney, eye or nerve damage	3/4*
	Diabetes - Other vascular disease or diabetes of >20 years duration	3/4*

22 This condition may make pregnancy an unacceptable health risk. Women should be advised that because of relatively higher pregnancy rates, as commonly used, spermicides, withdrawal, fertility awareness methods, cervical caps, diaphragms, or female or male condoms may not be the most appropriate choice.

Condition	Explanation of Condition		Medical Eligibility of COC
Gastrointestinal conditions	Gall bladder disease	Medically treated	3
		Current	3
	History of cholestasis	Past combined oral contraceptive-related	3
	Viral hepatitis	Acute or flare	3/4* (initiation)
	Cirrhosis	Severe (decompensated) - This condition may make pregnancy an unacceptable health risk. Women should be advised less effective methods (withdrawal, fertility awareness methods, or female or male condoms may not be the most appropriate choice)	4
	Liver tumours	Hepatocellular adenoma	4
Malignant (hepatoma) - This condition may make pregnancy an unacceptable health risk. Women should be advised less effective methods (withdrawal, fertility awareness methods, or female or male condoms may not be the most appropriate choice)		4	
Drug interaction	Anticonvulsant therapy	Certain anticonvulsants (barbiturates, carbamazepine, oxcarbazepine, phenytoin, primidone, topiramate)	3 Certain medications may interact with the method, making it less effective
		Lamotrigine	3 Combined hormonal contraceptives may reduce the effectiveness of lamotrigine
	Antimicrobial therapy	Rifampicin or rifabutin therapy	3 Certain medications may interact with the method, making it less effective

*Assess according to condition

7.3.4 Clinical Procedure

When to Start COC?

A woman can start using COCs any time she wants if it is reasonably certain she is not pregnant (see Rule out pregnancy checklist in Chapter 2).

Table 7-3: When to start COC

Woman's Situation	When to start
Having menstrual cycle or switching form a nonhormonal method	<p>Any time of the month</p> <ul style="list-style-type: none"> • If she is starting within 5 days after the start of her monthly bleeding, no need for a backup method. • If it is more than 5 days after the start of her monthly bleeding, she can start COCs any time if it is reasonably certain she is not pregnant. She will need a backup method* for the first 7 days of taking pills. (If you cannot be reasonably certain, see How and When to Use the Pregnancy Checklist and Pregnancy Tests) • If she is switching from an IUCD, she can start COCs immediately (see Copper-Bearing IUCD, Switching from an IUCD to another method).
Switching from a hormonal method	<ul style="list-style-type: none"> • Immediately, if she has been using the hormonal method consistently and correctly or if it is otherwise reasonably certain she is not pregnant. No need to wait for her next monthly bleeding. No need for a backup method. • If she is switching from injectables, she can begin taking COCs when the repeat injection would have been given. No need for a backup method.
Fully or nearly fully breast-feeding mothers	
Less than 6 months after giving birth	Give her COCs and tell her to start taking them 6 months after giving birth or when breast milk is no longer the baby's main food whichever comes first.
More than 6 months after giving birth	<ul style="list-style-type: none"> • If her monthly bleeding has not returned, she can start COCs any time if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 days of taking pills. (If you cannot be reasonably certain, use Pregnancy Checklist and Pregnancy Tests) • If her monthly bleeding has returned, she can start COCs as advised for women having menstrual cycles (see previous page).
Partially breast feeding	
Less than 6 weeks after giving birth	<ul style="list-style-type: none"> • Give COCs and tell her to start taking them 6 weeks after giving birth. • Also give her a backup method to use until 6 weeks since giving birth if her monthly bleeding returns before this time.

More than 6 weeks after giving birth	<ul style="list-style-type: none"> If her monthly bleeding has not returned, she can start COCs any time if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 day of taking pills (If you cannot be reasonably certain that she is not pregnant. Use Pregnancy Checklist and Pregnancy Test) If her monthly bleeding has returned, she can start COCs as advised for women having menstrual cycles.
Non-breastfeeding mothers	
Less than 4 weeks after giving birth	<ul style="list-style-type: none"> She can start COCs at any time on days 21-28 after giving birth. Give her pills any time to start during these 7 days. No need of backup method. (If additional risk for VTE, wait until 6 weeks).
More than 4 weeks after giving birth	<ul style="list-style-type: none"> If her monthly bleeding has not returned, she can start COCs any time if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 days of taking pills. (If you cannot be reasonably certain, use Pregnancy Checklist and Pregnancy Tests) If her monthly bleeding has returned, she can start COCs as advised for women having menstrual cycle.
No monthly bleeding (not related to childbirth or breastfeeding)	<ul style="list-style-type: none"> She can start COCs any time if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 days of taking pills.
After miscarriage or Abortion	<ul style="list-style-type: none"> Immediately. If she is starting within 7 days after first- or second-trimester miscarriage or abortion, no need for a backup method. If it is more than 7 days after first- or second-trimester miscarriage or abortion, she can start COCs any time if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 days of taking pills. (If you cannot be reasonably certain, use Pregnancy Checklist and Pregnancy Tests)
After taking Emergency Contraceptive Pills (ECPs)	<p>ECPs - COC or POP:</p> <ul style="list-style-type: none"> She can start or restart COCs immediately after she takes the ECPs. No need to wait for her next monthly bleeding. A continuing user who needed ECPs due to pills taking errors can continue where she left off with her current pack. If she does not start immediately but returns for COCs, she can start at any time if it is reasonably certain she is not pregnant. All women will need to use a backup method for the first 7 days of taking pills.

7.3.5 Client Instructions

Instructions for taking COCs

- Take one pill each day, preferably at the same time of the day.
- Start with the pill on the top left-hand corner of the packet and continue taking the next pill one each day following the arrow until all the white pills are gone (for 21 days) and then start the brown pills taking one pill each day for 7 days until all are gone.

- When the client begins to take the COCs, she may have some bleeding between menstrual periods. The light bleeding is not her menstrual period, is not dangerous and will likely go away after the first 3 months. She should continue taking the pill each day.
- The client may have some nausea or dizziness or headache because her body is adjusting to the pill. These discomforts usually disappear after one or two packs of pills. She should try taking the pill at bedtime or with the evening meal. If discomfort persists, she should come back to the clinic.
- When the 28-day pack is empty, the client should start taking pills from a new packet the next day. During the 7 days on the brown pills, she will have some withdrawal bleeding. Even if she is still bleeding after finishing them she should start the new packet the next day.
- Clients should not stop and start pills when their partner is away for a short period of time. COCs are not effective if not taken consistently.
- The client should use condoms in addition to COCs if she thinks there is any chance that she or her partner are at risk for exposure to STIs, including HIV.
- Acute vomiting and/or diarrhoea interfere with the effectiveness of COCs. If these symptoms persist for more than 24 hours, recommend the use of additional contraceptive protection until the client has been without the symptoms for 7 days.

Instructions for missed pills

Clients may forget taking pills or be late in taking it. Adolescents are more likely to forget pills. Therefore, clients be explained in detail what to do in case of missing pills. Various conditions related to missing pills and instructions are given in Table 7-4.

Table 7-4: Instruction for missed pills

Key message	<ul style="list-style-type: none"> • Take a missed hormonal pill as soon as possible. • Keep taking hormonal pills as usual, 1 daily (She may take 2 pills at the same time or on the same day).
Missed 1 or 2 active (hormonal) pills? Started new pack 1 or 2 days late?	<ul style="list-style-type: none"> • Take a hormonal pill as soon as possible. • Little or no risk of pregnancy.
Missed active (hormonal) pills 3 or more days in a row in the first or second week? Started new pack 3 or more days late?	<ul style="list-style-type: none"> • Take a hormonal pill as soon as possible when she remembers and then keep taking pills daily, 1 each day. • Use a backup method for the next 7 days. • Also, if she had sex in the past 5 days, she can consider emergency contraceptive pills (ECPs). See RH clinical protocol 1-11, Emergency Contraception.
Missed active (hormonal) 3 or more pills in the third week?	<ul style="list-style-type: none"> • Take a hormonal pill as soon as possible. • Finish all hormonal pills in the pack. Throw away the 7 nonhormonal pills in a 28-pill pack. • Start a new pack the next day. • Use a backup method for the next 7 days. • Also, if she had sex in the past 5 days, she can consider ECPs. See RH clinical protocol 1-11, Emergency Contraception.

Follow-up care

Advise the client to visit a clinic or to contact community-based services 3 months after starting COCs for a routine follow-up. In addition, encourage the client to visit the clinic or contact the community workers (e.g. FCHVs) anytime, if necessary.

Assess the following:

- Assess the client's satisfaction with the method.
- Determine if the client has had any problems or side effects and, if so, record them in the clinical records.
- If any serious problem or side effect is detected, refer the client to a health facility.
- At the clinical facility, update the medical history; measure blood pressure and weight, and perform any examination indicated by the history.
- Provide appropriate counselling and/or treatment as required.

7.3.6 Side Effects and Management

Review the common COC side effects with the client, as well as what to do if certain problems occur.

Table 7-5: Management of Side Effects and Health Problems

Side Effect	Assessment	Management
Amenorrhoea (absence of vaginal bleeding or spotting)	Ask how she has been taking her pills. Has she missed any pills in the cycle? Has she stopped taking pills? Rule out pregnancy by history, symptoms and physical exam (speculum or bimanual) or a pregnancy test (if indicated and available).	If intrauterine pregnancy is confirmed, stop COCs and assure her that the small dose of estrogen and progestin in the COCs to which she was exposed will have no harmful effect on the foetus. If she is not pregnant, no treatment is required except counselling and reassurance. Explain that if her period was irregular before beginning COCs, it will usually be irregular when COCs are stopped. Advise client to return to clinic if amenorrhoea continues to be a concern. If client is not taking COCs correctly, review instructions for use. If the client is taking COCs correctly, reassure her. Explain that absent menses most likely is due to lack of build-up of uterine lining; there is no menstrual blood present.

Side Effect	Assessment	Management
<p>Spotting or Bleeding (common during the first three months after starting the pills).</p> <p>See also Reproductive Health Clinical Protocols for Bleeding and Spotting on Hormonal Methods.</p>	<p>Has client recently begun COCs?</p> <p>Ask if she has missed one or more pills, or if she takes pills at a different time every day.</p> <p>As appropriate: Exclude gynaecological problems (e.g. uterine tumours, pregnancy, abortion, PID).</p> <p>If client taking rifampicin or epilepsy medication?</p>	<p>If yes, reassure. Advise that spotting and bleeding are common during the first 3 months of COCs use and decrease markedly in most women by the fourth month of use. Review and/or refer in 3 months if problem persists.</p> <p>If counselling and reassurance is not adequate, give 800 mg of Ibuprofen 3 times a day for 5 days.</p> <p>If yes, give instructions about what to do for missed pills and the importance of taking the pill at the same time every day. If she continues to miss pills, she may need to switch to another method to minimize risk of pregnancy.</p> <p>If gynaecological problems are present, refer to a doctor if possible, or manage according to clinical practice.</p> <p>Counsel client to switch to another method until she discontinues rifampicin or epilepsy medication.</p>
High Blood Pressure	<p>Allow 15 minutes rest, then repeat BP reading.</p> <p>Recheck BP on three visits, 1 week apart:</p> <p>Assess BP; if over 140/90 mm Hg on two more visits one week apart, stop COCs.</p>	<p>If blood pressure increases in a client who usually has normal blood pressure and is using COCs, follow closely. If any warnings (severe headaches, chest pain, and blurred vision) occur on two occasions or blood pressure > 140/90, COCs should be discontinued.</p> <p>If COCs are discontinued, help client make an informed choice of a non-hormonal method. Tell her that high BP due to COCs usually goes away within 1 to 3 months. Take BP every month, for 3 months, to be sure it returns to normal. If it does not, refer for further evaluation.</p>

Side Effect	Assessment	Management
Nausea/ Dizziness/ Nervousness (usually improves during first 3 months)	Find out if pills are taken in morning or on an empty stomach. As appropriate: Exclude pregnancy. Rule out other causes of nausea (gall bladder disease, hepatitis).	Take with evening meal or before bedtime. If pregnant, manage as above (see Amenorrhoea). Evaluate for disease (gall bladder disease, hepatitis, gastroenteritis). Counsel that it will probably decrease with time, or switch to a lower estrogen or a progestin-only method if problem is intolerable.
Severe Vomiting	Rule out other causes of vomiting.	If vomiting within 2 hours after taking the pill repeat the pill and manage vomiting with Clopropramide 1 tab 8 hourly for 3 days or SOS.

Table 7-6: Other Problems (May or May Not Be Method-Related)

Problem	Assessment	Management
Acne	Ask how and how often she cleans her face. Ask if she is currently under great stress.	Acne can initially worsen with COC use, but commonly improves with long-term use. Recommend cleaning face frequently with cold water and twice a day with an astringent, like lemon, and advise to avoid heavy creams. Counsel as appropriate. If condition is not tolerable, consider another method.
Breast Fullness or Tenderness (usually improves within 3 months of starting the COCs)	Determine whether client is pregnant by history and physical exam. Determine whether the woman has breast lumps or nipple discharge suspicious for cancer. If she is breastfeeding and breasts are tender, examine for breast infection. Ask whether client notices this only at a certain time of the month.	If pregnant, treat as above for Amenorrhoea. If physical exam shows lump or discharge suspicious for cancer, refer to appropriate source for diagnosis. If malignancy is discovered, help client make an informed choice of another method. If breasts are not infected, recommend appropriate clothing for support. If breast infection present, use warm compression, advise to continue breastfeeding and give antibiotics as appropriate. Switch to a lower estrogen pill if not already on lowest estrogen COCs. Advise client to avoid caffeine, chocolate, etc. If the lowest dose pill is unacceptable and symptomatic management not helpful, help client to make an informed choice of another method.

Problem	Assessment	Management
Cholasma (“mask of pregnancy”)	<p>Look for skin diseases. Determine whether she is pregnant.</p> <p>Ask about other causes, e.g., use of skin lightening creams containing mercury, recent pregnancy or sunburn.</p> <p>If no other cause is found, ask if the client sees this as a serious problem.</p>	<p>Treat or refer as appropriate.</p> <p>Counsel on stopping use of such creams and avoiding sunlight. Advise use of a sun hat. If recently pregnant, advise to wait 3 months and look for improvement.</p> <p>If “yes,” counsel the client to choose another method.</p>
Headaches	<p>Are the headaches severe, frequent or associated with nausea?</p> <p>Has she had loss of speech, numbness, weakness or tingling, or visual changes associated with the headaches?</p> <p>Have the headaches become worse since she began pills?</p> <p>Has she ever had high blood pressure?</p>	<p>If not severe, frequent or associated with nausea, reassure.</p> <p>If “yes,” discontinue COCs; help client to make an informed choice of another method. Refer for evaluation.</p> <p>If worse on COCs, switch to another contraceptive method if no other contraindications. If no worse or better, explore cause of headaches. COCs can be continued unless high blood pressure or neurologic symptom or signs develop, or headaches worsen on COCs.</p> <p>Regardless of history, check the blood pressure. If elevated, see High Blood Pressure above.</p>
Significant Unwanted Weight Gain or Weight Loss	<p>Inquire about eating habits which might promote weight gain or weight loss.</p> <p>If the client denies poor eating habits, but complains of increased appetite or weight gain without apparent cause, ask if the weight gain is unacceptable.</p> <p>Rule out weight gain due to pregnancy.</p>	<p>Instruct the client in proper nutrition and exercise.</p> <p>Explain to the client that all hormonal contraceptives might have a slight effect on weight, but the dose of hormones in COCs is very low and should have only a modest effect.</p> <p>If the client is pregnant, refer her according to her pregnancy. Stop COCs.</p>
Mood Change or Depression	<p>Discuss changes in mood.</p>	<p>If client thinks her depression has worsened while using COCs, help her make an informed choice of another method. If COCs have not caused depression to worsen, the pills can be continued.</p>

Note: There are also progestin-only pills (POPs) containing 0.075 mg of norgestrel only. They are useful for women who can't tolerate estrogen and they are useful during breastfeeding after 6 weeks of post-partum.

CHAPTER 8

PROGESTIN ONLY INJECTABLE CONTRACEPTIVES (DMPA)

8.1 INTRODUCTION

8.1.1 Injectables Available in Nepal

Currently depot-medroxy progesterone acetate (DMPA) known as DMPA[®] is the injectable contraceptive available in Nepal. DMPA is also available as “Sangini” in the private sector in Nepal.

8.1.2 Effectiveness

Contraceptive effectiveness depends upon the way it is used.

- Consistent and correct use: in the first year of use it is 0.2 pregnancies per 100 (2 pregnancy per 1000) women and
- Common use: it is 4 pregnancies per 1000 women.

8.1.3 Return of Fertility

When a client stops taking DMPA, it takes several months (generally 4 months and longer) to become pregnant after stopping the method. The duration a woman has used DMPA makes no difference on how quick her fertility returns.

8.2 PREREQUISITES

8.2.1 Infection Prevention

Infection prevention guidelines must be strictly applied while following safe injection procedures (For more detail on infection prevention practices, see Chapter Three: Infection Prevention).

8.2.2 Facilities

The minimum facilities for an injectable contraceptive service are:

- A place to register the clients
- A private area for counselling and injection
- A place for disposal of used syringes, needles and other waste
- Facility for hand washing/sanitizer before and after giving injection

8.2.3 Equipment and Supplies

For injection, essential supplies needed are disposable sterile syringes and needles, cotton, and a puncture-proof container for disposal of used needles and syringes.

8.2.4 Category of Provider/Training

Providers should be health staff trained in the use of DMPA. Such training should be based on the GoN/ NHTC /COFP/Counselling Training Curriculum. Health staff may include physicians, HAs, nurses, ANMs and AHWs.

8.2.5 Record Keeping and Reporting

The provider should fill the following forms before and after providing DMPA:

- Master Register (HMIS No. 1.1) Appendix A (I)
- Health Service Card (HMIS No. 1.2) Appendix A (II)
- Referral / Transfer Card (HMIS 1.4) Appendix A (III)
- Face Sheet (HMIS No. 3.1) Appendix A (V)
- DMPA (HMIS 3.2) Appendix A (VI)

The provider should ensure that the medical record forms are completed, regularly maintained and reported to the Health Section of Municipality and Health Office in the district.

8.3 SERVICE DELIVERY

8.3.1 Counselling and informed choice (For more detailed information refer to Chapter One: Counselling and Informed Choice)

All clients must receive appropriate counselling for selecting and using the method. Encourage clients to ask all their questions so that any uncertainties and misunderstandings can be cleared up. For selecting the method, counsel about:

- Advantages and disadvantages.
- The possibility of change in menstrual bleeding patterns, including amenorrhoea and menstrual irregularity.
- Alternative family planning methods, including information on effectiveness, risks and benefits, side effects and cost, as appropriate.
- Timing of injection.
- Return of fertility.

DMPA FOR WOMEN WITH HIV

- Women who are infected with HIV, have AIDS, or are on antiretroviral (ARV) therapy can safely use DMPA.
- The time between injections does not need to be shortened for women taking ARVs.
- Urge these women to use condoms along with DMPA. Used consistently and correctly, condoms help prevent transmission of HIV and other STIs.

8.3.2 Eligibility

Indications

DMPA should be provided to any woman who requests for it after appropriate counselling and reaching an informed decision, and who does not have any contraindication to its use.

CONDITIONS PROGESTIN ONLY INJECTABLE CONTRACEPTIVE COULD BE USED

WHO MEC Category 1: Use method in any circumstances

WHO MEC Category 2: Generally, use method

Table 8-1: Conditions DMPA could be used

Condition	Explanation of Condition	Medical Eligibility of DMPA	
Pregnancy		Not applicable	
Age	Menarche to < 18 years	2	
	18 to 45 years	1	
	> 45 years	2	
Parity	Nulliparous (has not given birth)	1	
	Parous (has given birth)	1	
Breast feeding	≥ 6 weeks to < 6 months post-partum (primarily breastfeeding)	1	
	≥ 6 months post-partum	1	
Post-partum (not breastfeeding)	<21 days	1	
	21-42 days	1	
	>42 days	1	
Post-abortion	First trimester	1	
	Second trimester	1	
	Immediate post-ectopic abortion	1	
Post-ectopic pregnancy		1	
History of pelvic surgery		1	
Smoking	Age <35 years	1	
	Age ≥ 35 years	<15 cigarettes/day	1
		≥15 cigarettes/day	1
Obesity	≥30 kg/m ² body mass index (BMI)	1 2 (From menarche to age <18 years, >30 kg/m ² body mass index is category 2 for DMPA)	

Condition	Explanation of Condition	Medical Eligibility of DMPA
Blood pressure	Measurement not available	NA (In settings where pregnancy morbidity and mortality risks are high and this method is one of few widely available contraceptives, women should not be denied access simply because their blood pressure cannot be measured.)
	History of high blood pressure during pregnancy (where current blood pressure is measurable and normal)	1)
	Adequately controlled hypertension, where blood pressure CAN be evaluated	2
	Elevated blood pressure (properly measured) Systolic 140–159 or diastolic 90–99	2
Deep venous thrombosis (DVT)/ Pulmonary embolism (PE)	History of DVT/PE	2
	DVT/PE and an anticoagulant therapy	2
	Family history of DVT/PE (first-degree relatives)	1
	Major Surgery - with prolonged immobilization	2
	Major Surgery - without prolonged immobilization	1
	Minor Surgery - without prolonged immobilization	1
	Known thrombogenic mutations (e.g., factor V Leiden, prothrombin mutation; protein S, protein C, and antithrombin deficiencies) [§]	2
	Varicose veins	1
	Superficial venous thrombosis	1
Dyslipidemia	Known dyslipidemias without other known cardiovascular risk factors	2
Valvular heart disease	Uncomplicated	1
	Complicated	1

Condition	Explanation of Condition	Medical Eligibility of DMPA	
Systemic lupus erythematosus	Immuno-suppressive treatment	2	
Neurological conditions	Headaches – non-migrainous (mid or severe)	1	
	Migraine without aura,	age <35 years	2
		Age ≥35 years	2
	Migraine with aura	At any age	2 (initiation)
	Epilepsy (if taking anticonvulsants – see drug interaction MEC 3)	1	
Depressive disorders	(certain medication may make it less effective)	1	
Reproductive tract infection and disorders	Vaginal bleeding	Irregular pattern without heavy bleeding	2
		Heavy or prolonged bleeding (including regular and irregular patterns)	2
	Endometriosis	1	
	Benign ovarian tumours (including cysts)	1	
	Severe dysmenorrhoea	1	
	Gestational trophoblastic disease	Decreasing or undetectable β-hCG levels	1
Persistently elevated β-hCG levels or malignant disease		1	
Cervical ectropion		1	
Cervical intraepithelial neoplasia (CIN)		2	
Cervical cancer (awaiting treatment)		2	
Breast disease	Undiagnosed mass	2	
	Benign breast disease	1	
	Family history of cancer	1	
Endometrial cancer		1	
Ovarian cancer		1	
Uterine fibroid	Without distortion of the uterine cavity	1	
	With distortion of the uterine cavity	1	

Condition	Explanation of Condition		Medical Eligibility of DMPA
Anatomic abnormalities			-
Pelvic inflammatory disease (PID)	Past PID (assuming no current risk factors for STIs) –	with subsequent pregnancy	1
		without subsequent pregnancy	1
	Current PID		1
Sexually transmitted infections (STIs)	Current purulent cervicitis, chlamydia, or gonorrhoea		1
	Other STIs (excluding HIV and hepatitis)		1
	Vaginitis (including trichomonas vaginalis and bacterial vaginosis)		1
	Increased risk of STIs		1
HIV/AIDS	High risk of HIV		2
	Asymptomatic or mild HIV clinical disease (WHO stage 1 or 2)		1
	Severe or advanced HIV clinical disease (WHO stage 3 or 4)		1
	Antiretroviral therapy – treated with nucleoside reserves transcriptase inhibitors (NRTIs)		1
	Antiretroviral therapy – treated with non-nucleoside reserves transcriptase inhibitors (NNRTIs)	Efavirenz (EFV) or nevirapine (NVP)	1
		Etravirine (ETR) or rilpivirine (RPV)	1
	Treated with protease inhibitors (PIs)††		1
	Treated with integrase inhibitors (raltegravir [RAL])		1
Schistosomiasis	Uncomplicated		1
	Fibrosis of the liver (if sever, see cirrhosis)		1
Tuberculosis	Pelvic		1
	Non-pelvic		1
Malaria			1

Condition	Explanation of Condition		Medical Eligibility of DMPA
Endocrine conditions	Diabetes	History of gestational diabetes	1
		Non-vascular – non-insulin dependent diabetes	2
		Non-vascular – insulin dependent diabetes	2
	Thyroid	Simple goitre	1
		Hyperthyroid	1
		Hypothyroid	1
Gastrointestinal conditions	Gall bladder disease	Symptomatic – treated by cholecystectomy	2
		Symptomatic Medically treated	2
		Symptomatic-Current	2
		Asymptomatic	2
	History of cholestasis	Pregnancy related	1
		Past CoC related	2
	Viral hepatitis	Acute or flare	1
		Carrier	1
		Chronic	1
	Cirrhosis	Mild (compensated)	1
Liver tumours	Focal nodular hyperplasia	2	
Anemias	Thalassemia		1
	Sickle cell anaemia		1
	Iron-deficiency anaemia		1

Condition	Explanation of Condition	Medical Eligibility of DMPA	
Drug interaction	Anticonvulsant therapy (barbiturates, carbamazepine, oxcarbazepine, phenytoin, primidone, topiramate)	1	
	Antimicrobial therapy	Broad-spectrum antibiotics	1
		Antifungal and antiparasitic	1
		Rifampicin or rifabutin therapy	1

Precautions

Usually, a woman with any of the conditions listed below should not use progestin-only injectables. In special circumstances, however, when other, more appropriate methods are not available or acceptable to her, a qualified provider who can carefully assess a specific woman's condition and situation may decide that she can use progestin-only injectables. The provider needs to consider the severity of her condition and, for most conditions, whether she will have access to follow-up.

WHO MEC Category 3: Should not use unless other methods not available

WHO MEC Category 4: DMPA should not be used in following condition

Table No 8-2: Condition DMPA should not be used

Condition	Explanation of Condition	Medical Eligibility of DMPA
Breast feeding	<6 weeks post-partum	3
Cardiovascular disease	Multiple risk factors for arterial cardiovascular disease (old age, smoking, diabetes and hypertension)	3
Hypertension ²³	Elevated blood pressure (properly measured) Systolic > 160 or diastolic > 100 ²⁴	3
	Vascular disease	3
Deep venous thrombosis (DVT)/ Pulmonary embolism (PE)	Acute DVT/PE	3

23 Assuming no other risk factors for cardiovascular disease exist. A single reading of blood pressure is not sufficient to classify a woman as hypertensive.

24 This condition may make pregnancy an unacceptable health risk. Women should be advised that because of relatively higher pregnancy rates, as commonly used, spermicides, withdrawal, fertility awareness methods, cervical caps, diaphragms, or female or male condoms may not be the most appropriate choice.

Ischemic heart disease	Current		3
	History of IHD		3
	Stroke (history of cerebrovascular accident)		3
Systemic lupus erythematosus	Positive (or unknown) antiphospholipid antibodies		3
	Severe thrombocytopenia		3 initiation
Neurological conditions	Migraine – with aura, at any age		3 continuation
Reproductive tract infection and disorders	Unexplained vaginal bleeding (suspicious for serious condition), before evaluation		3
	Breast cancer	Current	4
		Past no evidence of disease for at least 5 years	3
Endocrine conditions	Diabetes with kidney, eye or nerve damage		3
	Diabetes - Other vascular disease or diabetes of >20 years duration		3
Gastrointestinal conditions	Cirrhosis	Severe (decompensated)	3
	Liver tumours	Hepatocellular adenoma	3
		Malignant (hepatoma)	3

8.3.3 Clinical Assessment

Pregnancy can be excluded in most clients by history alone (refer to Chapter Two: Client Assessment). If pregnancy cannot be excluded, DMPA should not be started. Where facilities and trained staff are available, breast and pelvic exam should be provided for new DMPA clients.

During the screening and physical exam, the following conditions should be looked for:

- Known or suspected pregnancy
- Unexplained vaginal bleeding
- Breast lumps and possible breast cancer
- Migraine/headache
- Diabetes
- Jaundice
- Hypertension
- Deep vein thrombosis
- Heart attack (Myocardial infarction)

If none of these are found, DMPA may be given. If any of these conditions are found or suspected, the health provider must carefully consider the risks and benefits of DMPA use for this particular client.

Timing of Injection

When to start DMPA?

A woman can start injectable contraceptive any time she wants if it is reasonably certain she is not pregnant:

Table 8-3: When to start

Woman's Situation	When to start
Having menstrual cycle or switching from a non-hormonal method	<p>Any time of the month</p> <ul style="list-style-type: none"> • Within the first 7 days of the start of monthly bleeding, no need for a backup method • If it is more than 7 days after the start of her monthly bleeding, she can start DMPA any time if it is reasonably sure the woman is not pregnant. She will need a backup method for the first 7 days after the injection. • If she is switching from IUCD, she can start DMPA immediately
Switching from a hormonal method	<ul style="list-style-type: none"> • If she is switching from a hormonal method, can start immediately, if she has been using the hormonal method consistently and correctly or if it is otherwise reasonably certain she is not pregnant. No need to wait for her next monthly bleeding. No need for a backup method
Fully or nearly fully breastfeeding	
Less than 6 months after giving birth	<ul style="list-style-type: none"> • If she gave birth less than 6 weeks ago, delay her first injection until at least 6 weeks after giving birth. • If her monthly bleeding has not returned, she can start injectables any time between 6 weeks and 6 months. No need for a backup method. • If her monthly bleeding has returned, she can start injectables as advised for women having menstrual cycles
More than 6 months after giving birth	<ul style="list-style-type: none"> • If her monthly bleeding has not returned, she can start injectable anytime if it is reasonably certain she is not pregnant, she will need a backup method for the first 7 days after the injection. • If her monthly bleeding has returned, she can start injectables as advised for women having menstrual cycle
Partially breastfeeding	
Less than 6 weeks after giving birth	<ul style="list-style-type: none"> • Delay her first injection until at least 6 weeks after giving birth
More than 6 weeks after giving birth	<ul style="list-style-type: none"> • If her monthly bleeding has not returned, she can start injectables any time if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 days after the DMPA injection • If her monthly bleeding has returned, she can start injectable as advised for women having menstrual cycle

Woman's Situation	When to start
Non-breast-feeding mothers	
Less than 4 weeks after giving birth	<ul style="list-style-type: none"> • Immediately. No need for a backup method
More than 4 weeks after giving birth	<ul style="list-style-type: none"> • If her monthly bleeding has not returned, she can start injectables any time, if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 days after the injection • If her monthly bleeding has returned, she can start injectables as advised for women having menstrual cycles
No monthly bleeding (not related to childbirth or breastfeeding)	<ul style="list-style-type: none"> • She can start injectables any time if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 days after the injections
After miscarriage or abortion	<ul style="list-style-type: none"> • She can start the method immediately. If she is starting within 7 days after first- or second-trimester miscarriage or abortion, no need for a backup method. • If it is more than 7 days after first- or second trimester miscarriage or abortion, she can start injectables any time if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 days after the injection.
After taking emergency contraceptive pills (POP and COC)	<ul style="list-style-type: none"> • She can start or restart injectables on the same day as taking the ECPs. No need to wait for her next monthly bleeding to have the injection. • She will need to use a backup method for the first 7 days after the injection. If she does not start immediately but returns for injectables, she can start at any time if it is reasonably certain she is not pregnant.

8.3.4 Clinical Procedure

Technique of injection

(See also safe injection Chapter Three IP and HCWM)

- Check expiry date of DMPA vial and syringe (with 21-23 gauge intramuscular to be used)
- The vial containing DMPA should be carefully and gently shaken till fluid becomes smooth and homogenous before aspirating the material into the syringe. The exact amount of medication should be carefully drawn into the syringe (DMPA 150 mg). No need to wipe top of vial with antiseptic. If vial is cold, warm to skin temperature before giving injection.
- Wash: Wash hands with soap and water, if possible. Let your hand dry in the air. If injection site is dirty, wash it with soap and water. No need to wipe site with antiseptic.
- Careful aseptic technique should be used (sterile syringes, needles). Otherwise a serious problem could be caused (e.g., an abscess or hepatitis-HBV).
- Aspirate before injection to ensure that the needle is not in a vessel.
- Deep intramuscular injection in the gluteal or deltoid muscles should be carried out, preferably with the client in a sitting or prone position. The injection site should not be massaged.

- Dispose the syringes and needles safely in puncture-proof container. (Do not recap, bend, or break needle before disposal.)

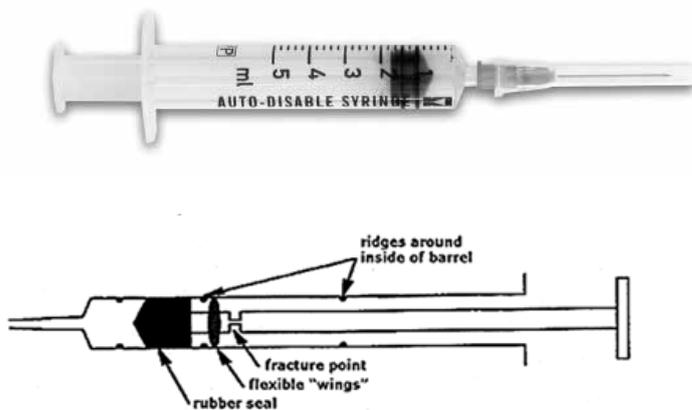
Auto-disable syringe

This is a category of syringe with auto-disable features²⁵ added to the syringe to prevent reuse. The features include clips, flanges, and other mechanisms inside the barrel of the syringe. Once the plunger is depressed past the point of the safety mechanism, it cannot be pulled backwards which prevents refilling and reuse of the syringe. Weak spots in the plunger will cause it to break if the user attempts to pull it back a second time.

Depending upon manufacturer, a variation of AD syringes is available so it is advised to study their instruction for use. In general, auto-disable syringes are designed for use with little or no instruction.²⁶ However, an initial practice session with the new syringes may help workers understand how to use them more quickly, may help them appreciate the benefits of auto-disable syringes, and may assist workers to switch between different types of syringes without wasting them.

Figure 8-1: AD syringes

Diagram of Auto-disable Syringe

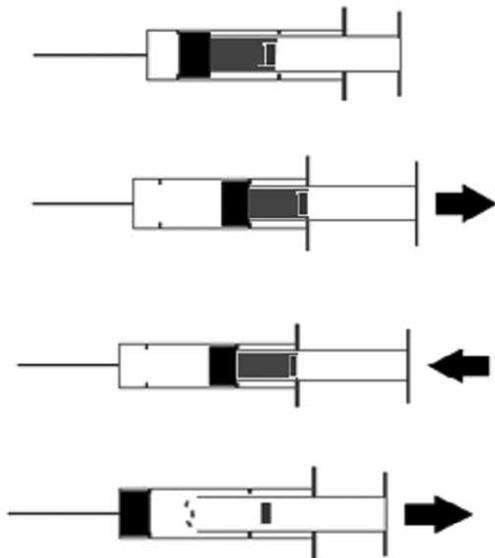


25 WHO guideline on the use of safety-engineered syringes for intramuscular, intradermal and subcutaneous injections in health-care settings, 2015

26 <https://path.azureedge.net/media/documents/SafeInjPDF-Module5.pdf>

Mechanism: how it works

This auto-disable syringe prevents over filling, using the syringe activates the auto-disable mechanism preventing reuse.

**Possible Emergency and Management**

Anaphylactoid reactions may occur immediately following DMPA injection. Fortunately, severe anaphylactic reactions are rare. Clients are encouraged to stay in the area for 20 minutes following an injection.

8.3.5 Client Instructions and Follow-up

Assure every client that she is welcome to come back any time for any problems or questions.

Subsequent injections

Instruct the client to return for another injection every 3 months (13 weeks). Give an exact appointment date for her to return. Let the client know that it is important that she return on the date given. If she cannot return on that date, she can come up to 2 weeks before the schedule injection date.

Remind her that she should try to come on time, but she should come back no matter how late she is (see Managing Late Injection below)

Managing Late Injections

- If the client is less than 4 weeks late for a repeat injection of DMPA, she can receive her next injection. No need for tests, evaluation, or a backup method.
- A client who is more than 4 weeks late for DMPA, can receive her next injection if:
 - She has not had sex since 2 weeks after the scheduled date of her injection, or
 - She has used a backup method or has taken emergency contraceptive pills (ECPs) after any unprotected sex since 2 weeks after the scheduled date of her injection, or
 - She is fully or nearly fully breastfeeding and she gave birth less than 6 months ago.
 - She will need a backup method for the first 7 days after the injection.

If client is more than 4 weeks late for DMPA and she does not meet above criteria, rule out pregnancy before giving injection.

8.3.6 Management of Side Effects and Health Problems

Table 8-4: Side Effects and Their Management for the Use of DMPA

Side Effect	Assessment	Management
Amenorrhoea (absence of vaginal bleeding or spotting)	Rule out pregnancy by checking symptoms; perform a pelvic exam (speculum and bimanual) and a pregnancy test (if indicated and available).	<p>Periods of amenorrhoea are common with DMPA users (40%). Reassure that there is no need to lose blood every month and this is not harmful.</p> <p>If not having monthly bleeding bothers women, she may want to switch to other method.</p> <p>However, amenorrhoea for 6 weeks or more after a pattern of regular menses may signal pregnancy and should be evaluated.</p> <p>If intrauterine pregnancy is confirmed, counsel client and refer for appropriate care. Discontinue injections and assure her that the small dose of hormone (Medroxyprogesterone) will have no harmful effect on the foetus.</p> <p>If negative pregnancy test, but enlarged uterus, counsel client to return in 2 to 4 weeks for repeat pelvic exam and pregnancy test.</p> <p>If ectopic pregnancy is suspected, refer for complete evaluation.</p>

Side Effect	Assessment	Management
<p>Bleeding/ Spotting (prolonged spotting or moderate bleeding)</p> <p>Prolonged spotting: >8 days</p> <p>Moderate bleeding: same as normal menses</p> <p>See RH Clinical Protocol 1-11 regarding Unscheduled Bleeding/ Spotting on Hormonal Contraceptives (Heavy or prolonged bleeding)</p>	<p>Perform a pelvic exam (speculum and bimanual) to be sure bleeding is not due to other cause (e.g., genital tract lesion such as vaginitis, cervicitis, cervical polyps or uterine fibroids).</p> <p>If pregnancy (intrauterine or ectopic) or incomplete abortion is suspected, examine and perform pregnancy test if indicated and available.</p>	<p>If abnormality of the genital tract is found, treat the problem if possible or refer for treatment. Do not discontinue DMPA. Advise client to return for additional counselling after management of problem.</p> <p>Reassure her that light intermenstrual bleeding or spotting occurs in a large percentage of women using DMPA (15–20%) during the first few months of use. It is not serious and usually does not require treatment.</p> <p>If haemoglobin less than 9 g/dl, hematocrit less than 27 or conjunctival pallor significant, give iron or iron folate (1 tablet daily for 1 to 3 months) and nutritional counselling. If anaemia persists, or client requests, discontinue DMPA and help client choose another method.</p> <p>If not satisfied after counselling and reassurance, but wants to continue using DMPA, give: A cycle of COCs for 21 days or Ibuprofen (800 mg three times daily for 5 days) or Mefenamic acid 500mg 2 times daily after meal for 5 days.</p> <p>How does Ibuprofen help reduce bleeding? Ibuprofen helps reduce prostaglandins hormone which helps reduce heavy and prolonged bleeding from endometrium.</p> <p>If pregnancy is confirmed, see Amenorrhoea section in this table.</p>
<p>Weight Gain or Loss (change in appetite)</p>	<p>Compare pre-injection weight (if known) and current weight.</p> <p>Rule out pregnancy as appropriate: Check that the client is eating and exercising properly.</p>	<p>Counsel client that weight changes may occur. (1-2 kg/year)</p> <p>Review diet if weight change is excessive. If weight gain is unacceptable, help client choose another method.</p>

Table 8-5: Other Problems (May or may not be method-related)

Problem	Assessment	Management
Breast Tenderness (mastalgia)	Rule out pregnancy. Check breasts for: <ul style="list-style-type: none"> • Lumps or cysts • Discharge or galactorrhoea (leakage of milk-like fluid) 	Refer for evaluation if abnormality present. If no abnormality, reassure. Do not discontinue injections unless client requests it.
Jaundice	Acute jaundice occurring after DMPA injection is not method related. Rule out: <ul style="list-style-type: none"> • Active liver disease (hepatitis) • Gall bladder • Benign or malignant tumours 	Progesterone has little effect on liver function and does not increase the risk of gall bladder disease or liver tumours. If she has hepatitis and does not want to stop using DMPA, it is unlikely to worsen liver disease and is safer than pregnancy.
Nausea/dizziness or Nervousness	Rule out pregnancy by checking symptoms; perform a pelvic exam (speculum and bimanual) and pregnancy test (if indicated and available).	If pregnant, refer as above for Amenorrhoea . If not pregnant, reassure that this is not a serious problem(s) and usually disappears with time.
Excess hair growth (hirsutism), acne/dermatitis or hair loss	Review history, pre- and post-injection of DMPA.	Pre-existing conditions such as increased facial or body hair might be worsened. Changes usually are not excessive, may improve over time, and do not require discontinuation of DMPA unless client requests it after counselling.
Lower Abdominal/Pelvic Pain (with or without symptoms of pregnancy)	Take careful history, perform abdominal and pelvic (speculum and bimanual) examination. Check vital signs: <ul style="list-style-type: none"> • Pulse • Blood Pressure • Temperature Examine to rule out: <ul style="list-style-type: none"> • Ectopic pregnancy • PID • Appendicitis • Ovarian cysts Do lab tests for Hb/Hct and pregnancy test if indicated and available.	Refer immediately if the client has any of the following: <ul style="list-style-type: none"> • Lower abdominal tenderness • Elevated resting pulse (more than 100 BPM) • Decreased blood pressure (less than 90/60) • Elevated oral temperature (38.3° C) • Suspected/confirmed pregnancy and acute anaemia (e.g., less than 9 g/ dl Hb or less than 27% Hct)

DEPOT-MEDROXY PROGESTERONE ACETATED SUBCUTANEOUS (DMPA-SC)

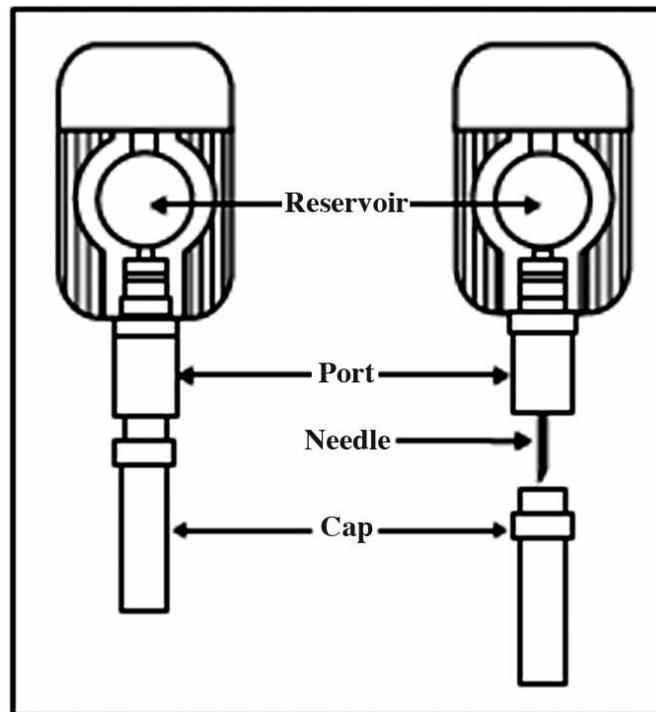
DMPA is now available in a special formulation called DMPA-SC. It is also called Depo-sub Provera 104 and has DMPA 104mg. DMPA-SC means it is only for subcutaneous injection (just under the skin) and for injection into muscle.

DMPA-SC is available in two injection systems and both have short needles for subcutaneous injections-

1. Prefilled single-dose conventional syringe,
2. In Uniject system.

The Uniject system is being piloted and expected to get scaled up based on results of the pilot.

With the Uniject system, the user squeezes a flexible reservoir that pushes the fluid through the needle. DMPA-SC in the Uniject system is marketed under the brand name Sayana Press. This product may be particularly useful for community-based programmes. Also, women can easily learn to give themselves subcutaneous injections with this system.



Parts of Uniject device

NORETHISTERONE ENANTHATE (NET-EN)

Though currently, it is not available in Nepal, another progestin-only injectable is NET-EN. NET-EN is progestin only injectable contraceptive and contains norethisterone. This injection is given in every 2 months. It is given as deep intramuscular injection into hip, upper arm, or buttock. It may be slightly more painful than intramuscular DMPA. Return of fertility on average about 1 month longer for NET-EN than with most other methods. Injection can be given up to 2 weeks early or late.

SUBDERMAL IMPLANTS

9.1 INTRODUCTION

There are different types of Implants. Jadelle and Sinoplant are two rod Implants while Implanon is a singlerod Implants. This chapter primarily describes Jadelle.

9.1.1 Implants Available/Approved for Nepal

Contraceptive subdermal Implants, Jadelle, is available in Nepal and consists of two rods. Each rod is 2.5 mm in diameter and 43 mm in length and contains 75 mg of levonorgestrel. It protects from pregnancy for up to 5 years. Implanon has been approved by DDA and yet to be brought into service provision.

9.1.2 Effectiveness

Jadelle Implants are one of the most effective reversible methods.

In the first year of use it is 0.05 pregnancies per 100 women users. The effectiveness of Implants (Jadelle) may decrease near the end of the duration of use as stated on the label for heavier women. Therefore, women weighing 80kg or more should have their Implants removed after 4 years.

9.1.3 Return of Fertility

When the rods are removed, the return of fertility is immediate; if the client does not want another pregnancy and does not want to use Implants any longer, she should begin using another contraceptive method right away.

9.2 PREREQUISITES

9.2.1 Infection Prevention

The insertion and removal of Implants are minor surgical procedures; aseptic technique, including good surgical technique, must be followed to prevent infection at the incision site. For more detailed information, refer to Chapter Three: Infection Prevention.

9.2.2 Facilities

The minimum facilities for Implants insertion/removal service are:

- A place to register the clients.
- A private area for consultation and counselling.
- A clean procedure room with maintaining privacy and having good light source for insertion and removal.
- A hand washing facility.
- A place for sterilizing equipment.
- A place for disposal of wastes.

9.2.3 Equipment and Supplies

Refer to Appendix B (I).

9.2.4 Category of Provider/Training

Providers should be health staffs who have been trained in the use of Implants. This training should be based on the GoN/NHTC training curriculum. The health staffs may include physician, health assistant, staff nurse, public health nurse, AHW, and ANM.

9.2.5 Record Keeping and Reporting

The provider should fill the following forms before and after providing Implants (Jadelle):

- Master Register (HMIS No. 1.1) Appendix A (I)
- Health Service Card (HMIS No. 1.2) Appendix A (II)
- Referral / Transfer Card (HMIS 1.4) Appendix A (III)
- Face Sheet (HMIS No. 3.1) Appendix A (V)
- Implants service register (HMIS 3.3) Appendix A (VII)

The provider should ensure that the medical record forms are completed, regularly maintained and reported monthly to the Health Section of the municipality, and health office in the district.

9.3 SERVICE DELIVERY

9.3.1 Counselling and Informed Choice

Implants clients must receive appropriate counselling for selecting and using the method. Encourage and give client an opportunity to ask all of their questions so that any uncertainties and misunderstandings can be cleared up.

Clearly discuss the following points for selecting the method:

- Alternate family planning methods
- The physical characteristic of the Implants, how and where to insert (which part of the body and how will it feel under the skin)
- Benefits and side effects of Implants
- Instruction for removal of Implants

After the client has chosen the Implants as her method, make sure that she understands the following:

- Possible changes in her menstrual bleeding pattern
- Benefits, side effects and complications
- Importance of removal or replacement after 5 years

9.3.2 Eligibility

Indications

Implants should be provided to any woman (married or unmarried or with or without children, any age including adolescents and women over 40 years of age) who selects them after appropriate counselling and who does not have any contraindication to its use.

Implants are particularly appropriate for those who:

- Prefer a method that does not require taking contraceptives every day or before having intercourse.

- Want long-term birth spacing or have the number of children they want but do not want or cannot have a permanent method (voluntary sterilization).
- Are breastfeeding (immediately and after 6 weeks post-partum) and need a contraceptive.
- Have had an abortion, miscarriage, or history of ectopic pregnancy.
- Smoke cigarettes, regardless of women's age or number of cigarettes smoked.
- Have varicose veins.
- Are living with HIV, whether or not on antiretroviral therapy.
- Prefer not to use contraceptives that contain estrogen, or have developed estrogen-related complications while taking combined oral contraceptives (COCs).

IMPLANTS FOR WOMEN WITH HIV

- Women who are living with HIV or are on antiretroviral (ARV) therapy can safely use Implants.
- Efavirenz may reduce the effectiveness of Implants.
- Urge these women to use condoms along with Implants. Used consistently and correctly, condoms help prevent transmission of HIV and other STIs.

CONDITIONS PROGESTIN CONTRACEPTIVE IMPLANTS COULD BE USED

WHO MEC Category 1: Use method in any circumstances

WHO MEC Category 2: Generally, use method

Table 9-1: Conditions Progestin Implants could be used

Condition	Explanation of Condition	Medical Eligibility of Implants
Pregnancy		Not applicable
Age	Menarche to < 18 years	1
	18 to 45 years	1
	> 45 years	1
Parity	Nulliparous (has not given birth)	1
	Parous (has given birth)	1
Breast feeding	< 6 weeks post-partum	2
	≥ 6 weeks to < 6 months post-partum (primarily breastfeeding)	1
	≥ 6 months post-partum	1
Post-partum (not breastfeeding)	<21 days	1
	21-42 days	1
	>42 days	1
Post-abortion	First trimester	1
	Second trimester	1
	Immediate post-ectopic abortion	1
	Post-ectopic pregnancy	1
	History of pelvic surgery	1

Condition	Explanation of Condition	Medical Eligibility of Implants	
Past-ectopic pregnancy		1	
History of pelvic surgery		1	
Smoking	Age <35 years	1	
	Age ≥35 years	<15 cigarettes/day	1
		≥15 cigarettes/day	1
Obesity	≥30 kg/m ³ body mass index (BMI)	1	
Blood pressure	In settings where pregnancy morbidity and mortality risks are high and this method is one of few widely available contraceptives, women should not be denied access simply because their blood pressure cannot be measured.	NA	
Cardiovascular disease	Multiple risk factors for arterial cardiovascular disease (old age, smoking, diabetes, and hypertension)	2	
	History of high blood pressure during pregnancy (where current blood pressure is measurable and normal)	2	
	Adequately controlled hypertension, where blood pressure CAN be evaluated	1	
	Elevated blood pressure (properly measured)	Systolic 140–159 or diastolic 90–99	1
		Systolic ≥160 or diastolic ≥100	2
	Vascular disease	2	
	History of high blood pressure during pregnancy (where current blood pressure is measurable and normal)	1	
	Deep venous thrombosis (DVT)/ Pulmonary embolism (PE)	History of DVT/PE	2
		DVT/PE and on anticoagulant therapy	2
		Family history of DVT/PE (first-degree relatives)	1
		Major Surgery - with prolonged immobilization	2
		Major Surgery - without prolonged immobilization	1
		Minor Surgery - without prolonged immobilization	1
	Known thrombogenic mutations (e.g., factor V Leiden, prothrombin mutation; protein S, protein C, and antithrombin deficiencies) ^g	2	
Varicose veins	1		
Superficial venous thrombosis	1		

Condition	Explanation of Condition		Medical Eligibility of Implants
Ischemic heart disease ^g	Current		2 (initiation)
	History of ischemic heart disease		2 (initiation)
Stroke (history of cerebrovascular accident) ^g			2 (initiation)
Dyslipidemia	Known dyslipidaemias without other known cardiovascular risk factors		2
Valvular heart disease	Uncomplicated		1
	Complicated		1
Systemic lupus erythematosus	Severe thrombocytopenia		2
	Immunosuppressive treatment		2
Neurological conditions	Headaches – non-migrainous (mild or severe)		1
	Migraine without aura	Age <35 years	2
		Age ≥35 years	2
	Migraine with aura	At any age	2 (initiation)
	Epilepsy (if taking anticonvulsants – see drug interaction MEC 3)		1
Depressive disorders	(certain medication may make it less effective)		1
Reproductive tract infection and disorders	Vaginal bleeding	Irregular pattern without heavy bleeding	2
		Heavy or prolonged bleeding (including regular and irregular patterns)	2
	Endometriosis		1
	Benign ovarian tumours (including cysts)		1
	Severe dysmenorrhea		1
	Gestational trophoblastic disease	Decreasing or undetectable β-hCG levels	
Persistently elevated β-hCG levels or malignant disease		1	
Cervical ectropion		1	
Cervical intraepithelial neoplasia (CIN)		2	
Cervical cancer (awaiting treatment)		2	
Breast disease		Undiagnosed mass	
	Benign breast disease		1
	Family history of cancer		1
Endometrial cancer ^g			1
Ovarian cancer ^g			1

Condition	Explanation of Condition		Medical Eligibility of Implants
Uterine fibroid	Without distortion of the uterine cavity		1
	With distortion of the uterine cavity		1
Anatomic abnormalities			-
Pelvic inflammatory disease (PID)	Past PID (assuming no current risk factors for STIs)	with subsequent pregnancy	1
		without subsequent pregnancy	1
	Current PID		1
Sexually Transmitted Infections (STIs)g	Current purulent cervicitis, chlamydia, or gonorrhoea		1
	Other STIs (excluding HIV and hepatitis)		1
	Vaginitis (including trichomonas vaginalis and bacterial vaginosis)		1
	Increased risk of STIs		1
HIV/AIDS	High risk of HIV		1
	Asymptomatic or mild HIV clinical disease (WHO stage 1 or 2)		1
	Severe or advanced HIV clinical disease (WHO stage 3 or 4)		1
	Antiretroviral therapy – treated with nucleoside reserves transcriptase inhibitors (NRTIs)		1
	Antiretroviral therapy – treated with non-nucleoside reserves transcriptase inhibitors (NNRTIs)	Efavirenz (EFV) or nevirapine (NVP)	2
		Etravirine (ETR) or rilpivirine (RPV)	1
	Treated with protease inhibitors (PIs)††		2
	Treated with integrase inhibitors (raltegravir [RAL])		1
Schistosomiasis	Uncomplicated		1
	Fibrosis of the liver (if severe, see cirrhosis)		1
Tuberculosisg	Pelvic		1
	Non-pelvic		1
Malaria			1

Condition	Explanation of Condition		Medical Eligibility of Implants
Endocrine conditions	Diabetes	History of gestational diabetes	1
		Non-vascular – non-insulin dependent diabetes	2
		Non-vascular –insulin dependent diabetesg	2
		With kidney, eye, or nerve damage	2
		Other vascular disease or diabetes of > 20 years' duration	2
	Thyroid	Simple goitre	1
		Hyperthyroid	1
		Hypothyroid	1
Gastrointestinal conditions	Gall bladder disease	Symptomatic – treated by cholecystectomy	2
		Symptomatic medically treated	2
		Symptomatic- Current	2
		asymptomatic	2
	History of cholestasis	Pregnancy related	1
		Past CoC related	2
	Viral hepatitis	Acute or flare	1
		Carrier	1
		Chronic	1
	Cirrhosis	Mild (compensated)	1
Liver tumours	Focal nodular hyperplasia	2	
Anemias	Thalassemia		1
	Sickle cell anaemiag		1
	Iron-deficiency anaemia		1
Drug interaction	Anticonvulsant therapy (barbiturates, carbamazepine, oxcarbazepine, phenytoin, primidone, topiramate)		2
	Lamotrigine		1
	Antimicrobial therapy	Broad-spectrum antibiotics	1
		Antifungal and antiparasitic	1
	Rifampicin or rifabutin therapy	2	

g This condition may make pregnancy an unacceptable health risk. Women should be advised that because of relatively higher pregnancy rates, as commonly used, withdrawal, fertility awareness methods, or female or male condoms may not be the most appropriate choice.

CONDITIONS PROGESTIN CONTRACEPTIVE IMPLANTS SHOULD NOT BE USED

WHO MEC Category 3: Should not use unless other methods not available

WHO MEC Category 4: Implants should not be used in following condition

Table No 9-2: Condition Implants should not be used

Condition	Explanation of Condition		Medical Eligibility of Implants
Cardiovascular disease	Deep venous thrombosis (DVT)/ Pulmonary embolism (PE)	Acute DVT/PE	3
Ischemic heart disease ^g	Current		3 (continuation)
	History of IHD		3 (continuation)
	Stroke (history of cerebrovascular accident)		3 (continuation)
Systemic lupus erythematosus	Positive (or unknown) antiphospholipid antibodies		3
Neurological conditions	Migraine – with aura, at any age		3 (continuation)
Reproductive tract infection and disorders	Unexplained vaginal bleeding (suspicious for serious condition), before evaluation		3
	Breast cancer ^g	Current	4
		Past no evidence of disease for at least 5 years	
Gastrointestinal conditions	Cirrhosis	Severe (decompensated)	3
	Liver tumours	Hepatocellular adenoma	3
		Malignant (hepatoma ^g)	

^g This condition may make pregnancy an unacceptable health risk. Women should be advised that because of relatively higher pregnancy rates, as commonly used, withdrawal, fertility awareness methods, or female or male condoms may not be the most appropriate choice.

9.3.3 Clinical Assessment

Pregnancy can be excluded in most clients by history alone (refer to Chapter Two: Client Assessment). If pregnancy cannot be excluded, Implants should not be inserted. Where facilities and trained staff are available, breast and pelvic exams should be provided for new Implants clients.

During the screening and physical exam, the following conditions should be looked for:

- Pregnancy known or suspected (the only absolute contraindication to Implants use)
- Unexplained vaginal bleeding
- Active liver disease (jaundice)
- Breast lumps and possible breast cancer
- Migraines
- Diabetes

- Hypertension
- Current medications, especially anticonvulsants and rifampicin
- Depression

If none of these are found, Implants may be given. If any of these conditions are found or suspected, the health provider must carefully consider the risks and benefits of Implants use for this particular client.

9.3.4 Clinical Procedure

Timing of insertion

A woman can start using Implants any time she wants if it is reasonably certain she is not pregnant.

Table 9-3: When to start

Woman's Situation	When to start
Having menstrual cycle or switching from a non-hormonal method	<p>Any time of the month</p> <ul style="list-style-type: none"> • Within the first 7 days of the start of monthly bleeding, no need for a backup method. • If it is more than 7 days after the start of her monthly bleeding, she can start Implants inserted any time if it is reasonably sure the woman is not pregnant. She will need a backup method for the first 7 days after the Implants insertion. • If she is switching from IUCD (See Chapter on IUCD).
Switching from a hormonal method	<ul style="list-style-type: none"> • If she is switching from a hormonal method, can start immediately, if she has been using the hormonal method consistently and correctly or if it is otherwise reasonably certain she is not pregnant. No need to wait for her next monthly bleeding. No need for a backup method. • If she is switching from a progestin-only injectable (e.g. DMPA), she can have the Implants inserted when the repeat injection would have been given. No need for a backup method.
Fully or nearly fully breastfeeding	
Less than 6 months after giving birth	<p>If her monthly bleeding has not returned, she can have Implants inserted any time between giving birth and 6 months. No need for a backup method.</p> <p>If her monthly bleeding has returned, she can have Implants inserted as advised for women having menstrual cycles.</p>
More than 6 months after giving birth	<p>If her monthly bleeding has not returned, she can have Implants inserted anytime if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 days after the insertion.</p> <p>If her monthly bleeding has returned, she can have Implants inserted as advised for women having menstrual cycle.</p>
Partially breastfeeding	
If her monthly bleeding has not returned	<p>She can have Implants inserted any time if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 days after insertion.</p>

If her monthly bleeding has returned	If her monthly bleeding has returned, she can have Implants inserted as advised for women having menstrual cycles
Non-breastfeeding mothers	
Less than 4 weeks after giving birth	She can have Implants inserted at any time. No need for a backup method.
More than 4 weeks after giving birth	<ul style="list-style-type: none"> If her monthly bleeding has not returned, she can have Implants inserted any time, if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 days after the insertion. If her monthly bleeding has returned, she can have Implants inserted as advised for women having menstrual cycles
No monthly bleeding (not related to childbirth or breastfeeding)	<ul style="list-style-type: none"> She can have Implants inserted any time if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 days after the insertion.
After miscarriage or abortion	<ul style="list-style-type: none"> Immediately. If Implants are inserted within 7 days after first or second-trimester miscarriage or abortion, no need for a backup method. If it is more than 7 days after first- or second-trimester miscarriage or abortion, she can have Implants inserted any time if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 days after the insertion.
After taking emergency contraceptive pills (POP and COC)	<ul style="list-style-type: none"> She can have Implants inserted on the same day as taking the ECPs. She will need to use a backup method for the first 7 days after the insertion. If she does not start immediately but returns for Implants insertion, she can start at any time if it is reasonably certain she is not pregnant.

9.3.5 Client Instructions and Follow-up

Wound care

The following instructions should be given to the client regarding wound care:

- Keep the area dry and clean for 4 days. The incision could become infected if the area gets wet while bathing or washing clothes.
- After the anaesthetic wears off, her arm may be sore for few days, there may be bruising, swelling or tenderness at the insertion site for a few days. This is common and will go away without treatment.
- Routine work can be done immediately, but do not put unusual pressure on the area for a few days.
- Can take off the gauze pad after 2 days and the adhesive bandage and surgical tape when incision heals, usually after 3 to 5 days.
- If signs of infection occur, such as fever, inflammation (**redness with heat**) at the site, or if **there is persistent pain for several days**, return immediately to the clinic.

9.3.6 Implants Removal

It is important to explain about need to have Implants removed before they start to lose effectiveness. She can have a new set of Implants if she wants.

Discuss about how to remember the date to return for Implants removal and possible replacement. Clients should be provided Implants removal services.

9.4 SIDE EFFECTS AND MANAGEMENT

Table 9-4: Side Effects and Management of Implants

Side Effect	Assessment	Management
Amenorrhoea (absence of vaginal bleeding or spotting)	Check for pregnancy (intrauterine or ectopic) by checking symptoms, perform a pelvic exam (speculum and bimanual) and a pregnancy test (if indicated and available).	<p>Amenorrhea occurs in about 7% of Implants users in the first year and decreases thereafter (USFDA 1990). Amenorrhea for 6 weeks or more, especially after a pattern of regular menses, however may signal pregnancy and should be evaluated.</p> <p>If not pregnant, no treatment is required except counselling and reassurance.</p> <p>Explain that blood does not build up inside the uterus with amenorrhea. (The continued action of small amounts of a progestin, such as LNG, shrinks the endometrium, leading to decreased menstrual bleeding and, in some women, no bleeding at all.) Finally, advise client to return to the health institution if amenorrhea continues to be a concern.</p> <p>If intrauterine pregnancy is confirmed, counsel clients regarding options. If the pregnancy will be continued, and refer for appropriate care. Remove the Implants and assure her that the small dose of hormone (levonorgestrel) to which she was exposed will have no harmful effect on the foetus.</p> <p>If miscarriage (spontaneous abortion) occurs (or pregnancy will not be continued) it is not necessary to remove the 2 rods Implants.</p> <p>If negative pregnancy test, but enlarged uterus, counsel client to return in 2 to 4 weeks for repeat pelvic exam and pregnancy test.</p> <p>If ectopic pregnancy is suspected, refer for complete evaluation.</p> <p>Do not give hormonal treatment (COCs) to induce withdrawal bleeding. It is not necessary and usually is not successful unless 2 or 3 cycles of COCs are given (TGWG 1994).</p>

Side Effect	Assessment	Management
<p>Bleeding/Spotting (prolonged spotting or moderate bleeding) Prolonged spotting: > 8 days</p> <p>Moderate bleeding >normal menses 50-80 ml</p> <p>Bleeding: Heavy bleeding twice as much or twice as long as normal)</p> <p>See Clinical Protocol 1-12 regarding Bleeding on Hormonal Contraceptives</p>	<p>Begin with reassurance, no need for assessment unless irregular bleeding continues or starts after several months of normal or no bleeding.</p> <p>If irregular bleeding occurs after normal or no monthly bleeding then: Perform a pelvic exam (speculum and bimanual) to be sure bleeding is not due to other cause (e.g., genital tract lesion such as vaginitis, cervicitis, cervical polyps or uterine fibroids).</p> <p>If no genital tract abnormality noted, check for significant anaemia (pale conjunctiva or nail beds, low hematocrit or haemoglobin). No other cause found, but client has prolonged bleeding (more than 8 days) or amount is more than normal menses.</p> <p>No other cause found, but bleeding is: Not reduced in 3 to 5 days, or Much heavier (1 to 2 pads per hour).</p>	<p>Reassure client that light, intermenstrual bleeding or spotting occurs in a large percentage of women using 2 rods Implants (50-80% of women during the first few months of use). It is not serious and usually does not require treatment. Most women can expect the altered bleeding pattern to become more regular after 6 to 12 months (Population Council 1990). If the client is not satisfied after counselling and reassurance, but wants to continue using Implants, two treatment options are recommended:</p> <p>A cycle of COCs (30 to 35 ug EE), or Ibuprofen (800 mg 3 times daily for 5 days) or Mefenamic Acid 500 mg 3 times for 5 days.</p> <p>If abnormality of the genital tract is found, treat the problem if possible or refer for treatment. Do not remove Implants. Advise client to return for additional counselling after management of problem(s).</p> <p>Be sure to tell the client to expect bleeding during the week after completing the COCs (21 pill pack) or during the last 7 pills if a 28-pill pack. See Amenorrhea above for management of pregnancy-related conditions. If haemoglobin less than 9 g/dl, hematocrit less than 27 or conjunctival pallor significant, give iron or iron folate (1 tablet daily for 1 to 3 months) and nutritional counselling. If anaemia persists, or client requests, discontinue Implants and help client choose another method. Note: Despite the increased frequency of bleeding in some women, the monthly blood loss in 2 rods Implants users usually is less than with normal menses in non-contracepting women. In some users, haemoglobin levels increase over time. (More women have increases than have decreases in haemoglobin.) (Population Council 1990). If not satisfied after counselling and reassurance, but wants to continue using Implants, give:</p>

Side Effect	Assessment	Management
	If pregnancy (intrauterine or ectopic) or incomplete abortion is suspected, examine and perform pregnancy test if indicated and available.	<p>2 COC pills per day for the remainder of the cycle (at least 3 to 7 days) followed by 1 cycle (1 pill per day) of COCs.</p> <p>Alternatively (if available), switch to 50 ug EE-containing COC, 50 ug EE or 1.25 mg conjugated estrogen for 14 to 21 days (TGWG 1994).</p> <p>Note: With either treatment, check to be sure bleeding has decreased within 3 days</p> <p>If pregnancy is confirmed, see Amenorrhoea section above.</p>
Rods Expulsion	Check for partial or complete expulsion of rods.	<p>Remove partially expelled rod(s). Check to determine if the other rod is in place.</p> <p>If an area of insertion is not infected (no pain, heat and redness) replace with new rods. If area of insertion is infected, see "Infection" below.</p>
Infection	Check area of insertion for infection (pain, heat and redness), pus or abscess.	<p>If infection (not abscess):</p> <ul style="list-style-type: none"> • Do not remove rods, instruct client not to attempt to remove the rods. • Cleanse with (soap and water or antiseptic). • Give appropriate oral antibiotic for 7 days. • Ask client to return after 1 week. If no improvement, remove rods and insert a new set in the other arm or help client choose another method. Continue to treat infection with 7 additional days of antibiotics. <p>If abscess (pocket of pus under the skin due to infection)</p> <ul style="list-style-type: none"> • Do not remove the Implants. • Clean the area with antiseptic. • Cut open (incise) and drain the abscess. • Treat the wound. • Give oral antibiotics for 7 to 10 days. • Ask the client to return after taking all antibiotics if she has heat, redness, pain, or drainage of the wound. If infection is present when she returns, remove the Implants or refer for removal.

Side Effect	Assessment	Management
Headache (especially with blurred vision)	<p>Ask if there has been a change in pattern or severity of headaches since beginning Implants.</p> <p>Perform Physical examination and check BP.</p> <p>Examine as appropriate:</p> <ul style="list-style-type: none"> • Eyes (fundoscopic) • Neurologic system 	<p>If headaches are mild, treat with paracetamol and reassure.</p> <p>Re-evaluate after 1 month if mild headaches persist.</p> <p>If blurred vision or vision difficulties are present, refer and/or remove Implants.</p> <p>If headaches are severe and/or recurrent or blood pressure is elevated since starting Implants, refer and/or remove Implants.</p>
Breast Tenderness (mastalgia)	<p>Rule out pregnancy.</p> <p>Check breasts for:</p> <ul style="list-style-type: none"> • Lumps or cysts • Discharge or • Galactorrhoea (leakage of milk-like fluid) 	<p>If pregnant, manage as described in Amenorrhea.</p> <p>If not pregnant, usually improves within 3 months of insertion of Implants.</p> <p>Do not remove rods unless client requests it after counselling.</p> <p>If physical examination shows lump or discharge suspicious for cancer (firm, non-tender or fixed which does not change during menstrual cycles), refer to appropriate source for diagnosis. If no abnormality present, reassure.</p>
Excess Hair Growth (hirsutism), or hair loss	<p>Review history, pre- and post-insertion of Implants.</p>	<p>Pre-existing conditions such as increased facial or body hair might be worsened. Changes usually are not excessive, may improve over time, and do not require discontinuation of Implants unless client requests it after counselling.</p>
Acne	<p>Ask how and how often she cleans face.</p> <p>Ask if she is currently under great stress.</p>	<p>Acne can worsen with Implants use. Recommend cleaning face twice a day with an astringent like lemon, and avoid using heavy facial creams.</p> <p>Counsel as appropriate; if condition is not tolerable, help client choose another method.</p> <p>Acne problem is less of a problem in women using COC.</p>
'Missing' rods	<p>Usually due to rods being inserted too deep (not palpable) a rod spontaneously expelled and forgotten by the client.</p>	<p>Can almost always be detected by x-ray or sonography. If two rods are present, do nothing until removal. At that time, the special studies/ tests may need to be repeated to localize the rods and an expert in removal of Implants consulted.</p>

Side Effect	Assessment	Management
Weight gain or loss (change in appetite)	Compare pre-insertion weight (if known) and current weight. Rule out pregnancy. Check that the client is eating and exercising properly.	Counsel client that normal fluctuations (increase or decrease of 1-2 kg) may occur. May occur over 5-7 years. Review diet if weight change is excessive (± 2 kg or more). If weight gain (or loss) is unacceptable even after counselling, remove rods, help client choose another method.
Depression, mood changes and changes in sex drive	Ask about these changes and give support as appropriate. For serious problem refer.	Depression may be related to the LNG; therefore, if client thinks her depression has worsened while using Implants, help her choose another method. If the Implants have not caused depression to worsen, they can be continued. If depression increases refer for appropriate consultation.
Lower Abdominal/ Pelvic Pain (with or without symptoms of pregnancy)	While rare, be alert to signs or symptoms of ectopic pregnancy as it is life threatening, lower abdominal pain may be due to enlarged follicle or cysts. Take history, perform abdominal and pelvic (speculum and bimanual) examination. Check vital signs: Pulse, BP, Temperature Examine to rule out: <ul style="list-style-type: none"> • Ectopic pregnancy • PID • Appendicitis • Ovarian cysts Do laboratory test for Hb/Hct and pregnancy test.	Refer immediately if the client has any of the following: <ul style="list-style-type: none"> • Moderate to severe lower abdominal tenderness (rebound) • Elevated resting pulse (more than 100 BPM) • Decreased blood pressure (less than 90/60) • Elevated oral temperature (38.3-degree C) • Suspected/confirmed pregnancy and acute anaemia (e.g., less than 9 g/ dl Hb or less than 27% Hct) In some women with 2 rods Implants, ovarian follicles develop and their shrinkage (atresia) is sometimes delayed. In these instances, the follicle may continue to grow beyond the size it would attain in a normal cycle. These enlarged follicles cannot be distinguished from ovarian cysts. They usually occur during the first 6 months of use, generally are asymptomatic and often are palpable. In most cases the enlarged follicles disappear spontaneously and should not require treatment or removal of rods. Rarely, they may twist or rupture, sometimes causing abdominal pain, and surgical intervention may be required.

INTRAUTERINE CONTRACEPTIVE DEVICES (IUCD)

10.1 INTRODUCTION

Intrauterine contraceptive devices are small, flexible plastic frame with copper sleeves or wire around it. The Copper T 380 (Cu-T) is shaped like a T of English alphabet and copper on its stem and the arms, with a total exposed copper area of 380 square mm. It has a white string at its base, which extends through the cervix so that the IUCD can be removed. This chapter primarily deals with CuT 380. Besides this, there are other types of hormonal as well as non-hormonal IUCDs.

10.1.1 IUCD Available in Nepal

The IUCD currently available in Nepal is the Copper T 380A. IUCD containing hormone is also available in Nepal which is yet to be approved by GoN.

10.1.2 Effectiveness

The CuT 380A is the most cost-effective reversible contraceptive in the market today. Contraceptive effectiveness depends upon the way it is used.

- For perfect user in the first year of use it is 0.6 pregnancies per 100 women.
- For common user it is 0.8 pregnancies per 100 women.

After insertion, the effective contraceptive action lasts for at least 12 years. Note that an IUCD inserted into a client just before the shelf life of the packaging expires is still effective for up to 12 years.

- IUCD can be used within its shelf life even if the colour of copper is changed. Sometimes the copper on copper-bearing IUCD tarnishes (i.e. the colour darkens), causing concern among providers about the safety and effectiveness of the affected IUCD. All available evidence suggests that tarnished IUCDs are safe and effective and can be inserted and used in the same way as untarnished IUCDs. Therefore, unless the IUCD package is torn or opened (or the shelf life has expired), a tarnished IUCD is still sterile, safe to use, and effective.²⁷

10.1.3 Return of Fertility

Fertility returns immediately after the removal of IUCD.

10.2 PREREQUISITES

10.2.1 Infection Prevention

Infection prevention must be strictly followed for safe insertion and removal procedures and no-touch technique should be strictly followed.

27 IUD Guidelines for Family Planning Service Programs, A problem solving reference manual, http://resources.jhpiego.org/system/files/resources/iud_manual_0.pdf

PREVENTING INFECTION AT IUCD INSERTION

Proper insertion technique can help prevent many problems, such as infection, expulsion, and perforation.

- Follow proper infection-prevention procedures.
- Use high-level disinfected or sterile instruments. High level disinfection can be done by boiling.
- Use a new, pre-sterilized IUCD that is packaged with its inserter.
- The **“no-touch” insertion technique** is the safest. This includes not letting the loaded IUCD or uterine sound touch any unsterile surfaces (for example, table top, hands, speculum, vaginal wall, etc). The no-touch technique involves:
 - Loading the IUCD into the inserter while the IUCD is still in the sterile package, to avoid touching the IUCD directly
 - Cleaning the cervix thoroughly with antiseptic before IUCD insertion
 - Being careful not to touch the vaginal wall or speculum blades with the uterine sound or loaded IUCD inserter
 - Passing both the uterine sound and the loaded IUCD inserter only once each through the cervical canal
- Giving antibiotics routinely is generally not recommended for women at low risk of STIs.

10.2.2 Facilities

The minimum facilities for insertion and removal of IUCD are:

- A place to register the client
- A private area for consultation and counselling
- A clean, good light source and curtained or separate area maintaining privacy for pelvic examination, insertions and removals
- Hand washing facility
- A place for sterilizing equipment
- Toilets
- A recovery area with a bed/couch
- Waste disposal area

10.2.3 Equipment and Supplies

Refer to Appendix C I.

10.2.4 Category of Provider/Training

Providers should be health staffs who have been trained in IUCD insertion and removal. Such training should be based on the GoN/ NHTC Training Curriculum. Health staff may include physician, integrated physician, SN and ANM (registered in professional councils).

10.2.5 Record Keeping and Reporting

The provider should fill the following forms before and after inserting IUCD:

- Master Register (HMIS No. 1.1) Appendix A (I)
- Health Service Card (HMIS No. 1.2) Appendix A (II)
- Referral / Transfer Card (HMIS 1.4) Appendix A (III)

- Face Sheet (HMIS No. 3.1) Appendix A (V)
- IUCD Service Register (HMIS 3.3) Appendix A (VII)
- The provider should ensure that the medical record forms are completed, regularly maintained and reported to the Health Section of Municipality and Health Office in the district.

10.3 SERVICE DELIVERY

10.3.1 Counselling and Informed Choice

All IUCD clients must receive appropriate counselling for selecting and using the method. Review the woman's history to determine the possibility of existing contraindications to the method, such as the risk of STIs, and take this into account when providing counselling. Encourage clients to ask all their questions so that any uncertainties and misunderstandings can be cleared up.

Before selecting the method, discuss the following points:

- Advantages and disadvantages of IUCD
- Alternative family planning methods
- The type of IUCD inserted (a sample should be shown) and the proper time for replacement
- Importance of follow-up

INTRAUTERINE CONTRACEPTIVE DEVICES FOR WOMEN WITH HIV

- Women living with HIV can safely have an IUCD inserted if they have mild or no clinical disease, whether or not they are on antiretroviral therapy.
- Women who have HIV infection with advanced or severe clinical disease should not have an IUCD inserted.
- If a woman becomes infected with HIV while she has an IUCD in place, it does not need to be removed.
- An IUCD user living with HIV who develops advanced or severe clinical disease can keep the IUCD but should be closely monitored for pelvic inflammatory disease.
- Urge women who have HIV or are at risk of HIV to use condoms along with the IUCD. Used consistently and correctly, condoms help prevent transmission of HIV and other STIs.
- Women who are at risk of HIV but not infected with HIV can have an IUCD inserted. The IUCD does not increase the risk of becoming infected with HIV. However, they should use condom along with IUCD.

10.3.2 Eligibility

Indications

IUCD should be provided to any woman who requests it after appropriate counselling and reaching an informed decision, and who does not have any contraindication to its use.

Conditions IUCD copper T 380 could be used

WHO MEC Category 1: Use method in any circumstances

WHO MEC Category 2: Generally, use method

Table 10-1 Conditions IUCD (Cu-T 380) could be used

Condition	Explanation of Condition	Medical Eligibility of Cu-T	
Age	Menarche to < 20 years	2	
	≥ 20 years	1	
Parity	Nulliparous (has not given birth)	2	
	Parous (has given birth)	1	
Breast feeding	< 6 weeks post-partum	*	
	≥ 6 weeks to < 6 months post-partum (primarily breastfeeding)	*	
	≥ 6 months post-partum	*	
Post-partum (not breastfeeding)	<21 days	*	
	21-42 days	*	
	>42 days	1	
Post-abortion	First trimester	1	
	Second trimester	2	
	Postectopic pregnancy	1	
	History of pelvic surgery	1	
Postectopic pregnancy		1	
History of pelvic surgery		1	
Smoking	Age <35 years	1	
	Age ≥35 years	<15 cigarettes/day	1
		≥15 cigarettes/day	1
Obesity	≥30 kg/m ³ body mass index (BMI)	1	
Blood pressure	Measurement not available	NA	

Condition	Explanation of Condition	Medical Eligibility of Cu-T	
Cardiovascular disease	Multiple risk factors for arterial cardiovascular disease (old age, smoking, diabetes, and hypertension)	1	
	Hypertension: History of high blood pressure cannot be evaluated (including hypertension in pregnancy)	1	
	Adequately controlled hypertension, where blood pressure CAN be evaluated	1	
	Elevated blood pressure (properly measured)	Systolic 140–159 or diastolic 90–99	1
		Systolic ≥ 160 or diastolic ≥ 100	1
	Vascular disease		1
	History of high blood pressure during pregnancy (where current blood pressure is measurable and normal)		1
	Deep venous thrombosis (DVT)/ Pulmonary embolism (PE)	History of DVT/PE	1
		Acute DVT/PE	1
		DVT/PE and on anticoagulant therapy	1
		Family history of DVT/PE (first-degree relatives)	1
		Major Surgery - with prolonged immobilization	1
		Major Surgery - without prolonged immobilization	1
		Minor Surgery - without prolonged immobilization	1
		Known thrombogenic mutations (e.g., factor V Leiden, prothrombin mutation, protein S, protein C, and antithrombin deficiencies)	1
Superficial venous disorders	Varicose veins	1	
	Superficial venous thrombosis	1	
Ischemic heart disease	Current	1	
	History of ischemic heart disease	1	
Stroke (history of cerebrovascular accident)		1	
Dyslipidemia	Known dyslipidaemias without other known cardiovascular risk factors	1	

Condition	Explanation of Condition		Medical Eligibility of Cu-T
Valvular heart disease	Uncomplicated		1
	Complicated (prophylactic antibiotics are advised before providing the method)		2
Systemic lupus erythematosus	Positive (or unknown) antiphospholipid antibodies		1
	Severe thrombocytopenia		2 (continuation)
	Immuno-suppressive treatment		2 (initiation) 1 (continuation)
Neurological conditions	Headaches – non-migrainous (mild or severe)		1
	Migraine without aura,	age <35 years	1
		Age ≥35 years	1
	Migraine with aura	At any age	1
	Epilepsy		1
Depressive disorders			1
Reproductive tract infection and disorders	Vaginal bleeding	Irregular pattern without heavy bleeding	1
		Heavy or prolonged bleeding (including regular and irregular patterns)	2
		Unexplained vaginal bleeding (suspicious for serious condition), before evaluation	2 (continuation)
	Endometriosis		2
	Benign ovarian tumours (including cysts)		1
	Severe dysmenorrheal		2
	Gestational trophoblastic disease	Cervical ectropion	
Cervical intraepithelial neoplasia (CIN)		1	
Cervical cancer (awaiting treatment)		2 (continuation)	
Breast disease	Undiagnosed mass		1
	Benign breast disease		1
	Family history of cancer		1
Endometrial cancer			2 (continuation)
Ovarian cancer			2 (continuation)
Uterine fibroid	Without distortion of the uterine cavity		1
Anatomic abnormalities	Other abnormalities not distorting the uterine cavity or interfering with IUCD insertion (including cervical stenosis or laceration)		2
Pelvic inflammatory disease (PID)	Past PID (assuming no current risk factors for STIs)	with subsequent pregnancy	1
		without subsequent pregnancy	2
	Current PID		2**

Condition	Explanation of Condition	Medical Eligibility of Cu-T	
Sexually transmitted infections (STIs)	Current purulent cervicitis, chlamydia, or gonorrhoea	2 (continuation)	
	Other STIs (excluding HIV and hepatitis)	2	
	Vaginitis (including trichomonas vaginalis and bacterial vaginosis)	2	
	Increased risk of STIs	2 (initiation) 3 (if very high individual likely of STIs-2 (continuation))	
HIV/AIDS	High risk of HIV	2	
	Asymptomatic or mild HIV clinical disease (WHO stage 1 or 2)	2	
	Severe or advanced HIV clinical disease (WHO stage 3 or 4)	2 (continuation)	
	Anti-retroviral therapy – treated with nucleoside reserves transcriptase inhibitors (NRTIs)	2 (initiation) 3-if severe or advanced HIV clinical disease for initiation) 2 (continuation)	
	Antiretroviral therapy – treated with non-nucleoside reserves transcriptase inhibitors (NNRTIs)	Efavirenz (EFV) or nevirapine (NVP)	2 (initiation) 3-if severe or advanced HIV clinical disease for initiation) 2 (continuation)
		Etravirine (ETR) or rilpivirine (RPV)	2 (initiation) 3-if severe or advanced HIV clinical disease for initiation) 2 (continuation)
	Treated with protease inhibitors (PIs)††	2 (initiation) 3-if severe or advanced HIV clinical disease for initiation) 2 (continuation)	
Treated with integrase inhibitors (raltegravir [RAL])	2 (initiation) 3-if severe or advanced HIV clinical disease for initiation) 2 (continuation)		
Schistosomiasis	Uncomplicated	1	
	Fibrosis of the liver (if severe, see cirrhosis)	1	
Tuberculosis	Non-pelvic	1	
Malaria		1	

Condition	Explanation of Condition		Medical Eligibility of Cu-T
Endocrine conditions	Diabetes	History of gestational diabetes	1
		Non-vascular – non-insulin dependent diabetes	1
		Non-vascular –insulin dependent diabetes	1
		With kidney, eye, or nerve damage	1
		Other vascular disease or diabetes of > 20 years' duration	1
	Thyroid	Simple goiter	1
		Hyperthyroid	1
		Hypothyroid	1
Gastrointestinal conditions	Gall bladder disease	Symptomatic – treated by cholecystectomy	1
		Symptomatic- Medically treated	1
		Symptomatic- Current	1
		Asymptomatic	1
	History of cholestasis	Pregnancy related	1
		Past CoC related	1
	Viral hepatitis	Acute or flare	1
		Carrier	1
		Chronic	1
	Cirrhosis	Mild (compensated)	1
		Severe (decompensated)	1
	Liver tumours	Focal nodular hyperplasia	1
		Hepatocellular	1
Malignant (hepatoma)		1	
Anemias	Thalassemia		2
	Sickle cell anaemia		2
	Iron-deficiency anaemia		2
Drug interaction	Anticonvulsant therapy (barbiturates, carbamazepine, oxcarbazepine, phenytoin, primidone, topiramate)		1
		Lamotrigine	1
	Antimicrobial therapy	Broad-spectrum antibiotics	1
		Antifungal and antiparasitic	1
		Rifampicin or rifabutin therapy	1

*Postpartum IUCD use: For the copper-bearing IUCD, insertion at < 48 hours is category 1. For the LNG-IUD, insertion at <48 hours is category 2 for breastfeeding women and category 1 for women not breastfeeding. For all women and both IUCD types, insertion from 48 hours to < 4 weeks is category 3; > 4 weeks, category 1; and puerperal sepsis, category 4

**Treat PID using appropriate antibiotics. There is usually no need to remove the IUCD if the client wishes to continue use.

Precautions

- Has **suspected pregnancy** by history, symptoms or signs: If the possibility of pregnancy **cannot** be excluded by history, examination or pregnancy testing, insertion of an IUCD should be delayed until the client's next menstrual period. In the interim, help the client to choose another contraceptive method, such as condoms.
- PID or STI currently or within the last 3 months.
- Is at high risk of **STIs**: A woman who has more than one sexual partner or whose partner has more than one sexual partner should be counselled that she is at risk of STIs and that the IUCD will not protect her from STI. If she opts to use an IUCD, she (or her partner) should also use condoms.
- **Unexplained vaginal bleeding**: Ideally, the cause of any persistent, unexplained vaginal bleeding or spotting (e.g., between periods or after intercourse) should be determined and, if possible, treated before an IUCD is inserted. Until the cause of the bleeding is determined and any serious problem treated, the client can use another reliable method.

ALERT: Other Problems Requiring Action for the Use of IUCD Vaginal Infection (candidiasis or bacterial vaginosis without cervicitis): Treat and resolve infection before inserting an IUCD. Give another temporary method until the infection is cleared up.

Severe anaemia (i.e., haemoglobin less than 7 gm/dl or haematocrit less than 20%): Choose the IUCD only if it is the best overall method for that client. If after counselling, the Copper T 380A IUCD is still the client's chosen method, she should be treated with iron or iron/folate for anaemia.

Cervical stenosis: Counsel the client about this problem. If indicated, refer client to a centre where cervical dilation with local anaesthesia is available if client chooses IUCD.

Have painful menstrual periods: Counsel client about this to be certain she understands potential problems with having an IUCD. IUCD should not be the first choice.

Precautions for the use of intrauterine contraceptive device (Cu-T-380)

WHO MEC Category 3: Should not use unless other methods not available

WHO MEC Category 4: Implants should not be used in following condition

Table 10-2: Condition IUCD should not be used

Condition	Explanation of Condition	Medical Eligibility of IUCD
Pregnancy		4
Post-partum	≥48 hours to < 4 weeks	3
	Puerperal sepsis	4
Post-abortion	Immediate post-septic abortion	4
Systemic lupus erythematosus	Severe thrombocytopenia	3 (initiation)

Reproductive Tract Infection and Disorders	Unexplained vaginal bleeding (suspicious for serious condition), before evaluation		4 (initiation)
	Gestational trophoblastic disease	Decreasing or undetectable b-hCG level	3
		Persistently elevated b-hCG level or malignant disease	4
	Cervical cancer (awaiting treatment)		4 (initiation)
	Endometrial cancer		4 (initiation)
	Ovarian cancer		3 (initiation)
	Uterine fibrosis (with distortion of uterine cavity)		4 (initiation)
Anatomical abnormalities	Distorted uterine cavity		4
PID	Current PID		4 (initiation)
Sexually transmitted infections	Current purulent cervicitis, chlamydia, or gonorrhoea		4 (initiation)
	Increased risk of STIs		3 (if women have a very high likelihood of STIs for initiation)
HIV/AIDS	Severe or advanced HIV clinical disease (WHO stage 3 or 4)		3 (initiation)
	Antiretroviral therapy – treated with nucleoside reserves transcriptase inhibitors (NRTIs)		3-if severe or advanced HIV clinical disease for initiation)
	Antiretroviral therapy – treated with non-nucleoside reserves transcriptase inhibitors (NNRTIs)	Efavirenz (EFV) or nevirapine (NVP)	3-if severe or advanced HIV clinical disease for initiation)
		Etravirine (ETR) or rilpivirine (RPV)	3-if severe or advanced HIV clinical disease for initiation)
Treated with protease inhibitors (PIs)		3-if severe or advanced HIV clinical disease for initiation)	
Tuberculosis	Known pelvic		4 (initiation)
			3 (continuation)

10.3.3 Clinical Assessment

The purpose of the health assessment is to determine the client's suitability for the use of the method. It is also an opportunity to offer other available sexual and reproductive health services as appropriate.

- **Medical/social history:** include gynaecological and obstetric history; present illness, including diabetes, anaemia or immunodepression; and history of STIs, including HIV, PID and risk factors to STI such as multiple sexual partners.
- **Physical examination:** speculum visualization of cervix and bimanual pelvic examination must always be included and any other examination as indicated by the medical history.
- **Laboratory tests:** these are not routinely required for the use of an IUCD except when indicated by medical history and physical examination.

10.3.4 Clinical Procedure

Timing of insertion of the IUCD

In many cases a woman can insert the IUCD any time if it is reasonably certain she is not pregnant.

Table 10-3: Interval insertion

Woman's situation	When to start
Having menstrual cycle	Anytime of the month, <ul style="list-style-type: none"> • If she is within 12 days after the start of her monthly bleeding. No need of backup method. • If it is more than 12 days of monthly bleeding, she can have the IUCD inserted at any time. If it is known that the woman is not pregnant (for detailed information refer to Chapter 2: Client Assessment). There is no need of backup method with IUCD.
Switching from another method	<ul style="list-style-type: none"> • Immediately, if she has been using the method consistently and correctly or if it is otherwise reasonably certain she is not pregnant. No need to wait for her next monthly bleeding. No need for a backup method. • If she is switching from an injectable, she can have the IUCD inserted when the next injection would have been given. No need for a backup method.
Post-partum (immediate*) , regardless of breastfeeding status (for details of earliest timing of insertion refer to chapter 13)	<ul style="list-style-type: none"> • Any time within 48 hours after giving birth, including by caesarean delivery. (Provider needs specific training in post-partum insertion by hand or using a ring forceps.) • If it is more than 48 hours after giving birth, delay until 4 weeks or more after giving birth.
Fully or nearly fully breastfeeding mothers	
Less than 6 months after giving birth	<ul style="list-style-type: none"> • If it is more than 48 hours after giving birth, delay until 4 weeks or more after giving birth. If her monthly bleeding has not returned, she can have the IUCD inserted any time between 4 weeks and 6 months after giving birth. No need to a backup method. • If her monthly bleeding has returned, she can have the IUCD inserted as advised for women having menstrual cycles (see above).
More than 6 months after giving birth	<ul style="list-style-type: none"> • If her monthly bleeding has not returned, she can have the IUCD inserted any time it is reasonably certain she is not pregnant. No need for a backup method. • If her monthly bleeding has returned, she can have the IUCD inserted as advised for women having menstrual cycles (see previous page).

Woman's situation	When to start
Partially breast feeding or non-breastfeeding mothers	
More than 4 weeks after giving birth	<ul style="list-style-type: none"> • If her monthly bleeding has not returned, she can have the IUCD inserted if it can be determined that she is not pregnant (see Ruling Out Pregnancy). No need for a backup method. • If her monthly bleeding has returned, she can have the IUCD inserted as advised for women having menstrual cycles.
No monthly bleeding (not related to childbirth or breast feeding)	Any time if it can be determined that she is not pregnant.
After miscarriage or abortion	<ul style="list-style-type: none"> • Immediately, if the IUCD is inserted within 12 days after first or second trimester abortion or miscarriage and if no infections is present. No need for a backup method. • If it is more than 12 days after first or second trimester miscarriage or abortion and no infection is present, she can have the IUCD inserted any time if it is reasonably certain she is pregnant. No need for a backup method. • If infection is present, treat or refer, and help the client choose another method. If she still wants the IUCD, it can be inserted after the infection has completely cleared. • IUCD insertion after second trimester abortion or miscarriage requires specific training. If not specifically trained, delay insertion until at least 4 weeks after miscarriage or abortion.
For emergency contraception	<ul style="list-style-type: none"> • Within 5 days after unprotected sex. • When the time of ovulation can be estimated, she can have an IUCD inserted up to 5 days after ovulation. Sometimes this may be more than 5 days after unprotected sex.
After taking emergency contraceptive pills (ECPs)	<ul style="list-style-type: none"> • IUCD can be inserted on the same day that she takes the ECPs (progestin-only, combined, or ulipristal acetate ECPs). No need for a backup method. • If she does not have it inserted immediately, but returns for an IUCD, she can have it inserted any time if it can be determined that she is not pregnant (see Ruling Out Pregnancy).

*Note: Immediate and early post-partum insertion and immediate post-abortion insertion should be performed only by specially trained health personnel.

Removal of IUCD

It is important that provider must not refuse or delay when women ask for removal of IUCD. The reason could be medical or personal. If a woman is finding it difficult to tolerate its side effects, first discuss about it and if she would rather try to manage the problems or to have the IUCD removed immediately.

In general, removal of IUCD is simple and can be done any time of the month. Removal may be easier during monthly bleeding when the cervix is naturally softened.

If there is difficulty with removal, including breaking of the string, excessive pain, or a question of perforation or embedding of the IUCD, referral to a physician in a fully equipped facility should be undertaken. The indication for removal may be medical or personal:

Medical

- Pregnancy (only if threats visible)
- Excessive bleeding
- Severe anaemia (haemoglobin less than 8 gm/dl or hematocrit less than 20%)
- Unacceptable lower abdominal pain associated with menstrual cramping
- Signs of pelvic inflammatory disease
- Known or suspected uterine or cervical neoplasia
- Partial expulsion
- Menopause

Personal

- Desire for pregnancy
- Change of method
- No need for protection against pregnancy

10.3.5 Management of Possible Problems during Insertion and Removal

Table 10-4: Management of Problems during Insertion or Removal of IUCD

Problem	Assessment	Management
Fainting (syncope); slow heart rate (bradycardia) or vasovagal episode during IUCD insertion or removal	<p>Is woman extremely anxious?</p> <p>Does she have a small uterus or cervical stenosis?</p> <p>(These characteristics increase risk for fainting and/or vasovagal reaction.)</p>	<p>Every step of IUCD insertion and removal should be done slowly and very gently, with an explanation of each step to the client.</p> <p>If available, aspirin, acetaminophen or ibuprofen may reduce pain associated with IUCD insertion or removal. Provide 30 minutes prior to procedure and for 24 hours afterwards.</p> <p>Maintain a calm, relaxed, unhurried atmosphere and a gently reassuring approach to the client.</p> <p>At the earliest sign of fainting, stop the insertion. Resume the procedure once the episode has passed and client desires.</p>
IUCD Sterile Package Damaged	Inspect package before use. Be alert for break in seal or plastic cover.	Discard and use another IUCD from a sterile package.

Problem	Assessment	Management
Suspected Uterine Perforation (during uterine sounding or IUCD insertion)	Client complains of sudden significant pain during procedure.	<p>Stop the procedure (and remove IUCD if inserted). Observe for signs of intra-abdominal bleeding (e.g., falling BP, rising pulse, severe abdominal pain, tenderness, guarding and rigidity). If intra-abdominal bleeding is suspected, stabilize (IVs) and refer (if necessary) for further evaluation and possible surgery.</p> <p>If intra-abdominal bleeding not suspected, keep for observation and take BP and pulse every 15 minutes for 90 minutes.</p> <p>If negative after 2 hours, discharge with instructions for warning signs, which require immediate return to clinic. Return after 1 week for check-up.</p> <p>Provide backup contraceptive method and help client make an informed choice of another method.</p>

10.3.6 Client Instructions and Follow-up

Instruct clients on following points:

- To visit the clinic after one month even if there is no problem and if there is any problem, ask the client to visit the clinic immediately.
- Expulsion of IUCD is uncommon.
- Since most expulsions occur during menstruation, the IUCD user should check menstrual cloths, pads or tampons, as well as the toilet or latrine, during menstrual periods. If the device is expelled accidentally, she should return to where she received her IUCD for possible insertion of another IUCD. She should use another contraceptive method until her IUCD is replaced. It is not necessary to check the string after every menstruation as recommended earlier but the client needs to be careful on missing string.

MISSING STRINGS (SUGGESTING POSSIBLE PREGNANCY, UTERINE PERFORATION, OR EXPULSION)

- Ask the client:
 - Whether and when she saw the IUCD come out
 - When she last felt the strings
 - When she had her last monthly bleeding
 - If she has any symptoms of pregnancy
 - If she has used a backup method since she noticed the strings were missing
- Always start with minor and safe procedures and be gentle. Check for the strings in the folds of the cervical canal with forceps. About half of missing IUCD strings can be found in the cervical canal.
- If strings cannot be located in the cervical canal, either they have gone up into the uterus or the IUCD has been expelled unnoticed. Rule out pregnancy before attempting more invasive procedures. Refer for evaluation (ultrasound, or x-ray- if pregnancy can be ruled out). Give her a backup method to use in the meantime, in case the IUCD came out.

Changes in the client's menstrual periods

For most women the first few periods will be heavier, last longer and may have more cramping. There might also be intermenstrual bleeding or spotting. This is not harmful. However, if the bleeding lasts twice as long as usual or if she uses twice as many pads, cloths or tampons, she should see a healthcare provider.

Special concern for return visits

A woman should get medical help as soon as possible if she has any of the following problems:

- P= Period late (pregnancy), abnormal spotting or bleeding.
- A= Abdominal pain, pain with intercourse, severe cramping.
- I= Infection exposure (such as gonorrhoea), abnormal discharge.
- N= Not feeling well, fever, chills, especially if accompanied by lower abdominal pain.
- S= String missing, shorter or longer, or the plastic tip of the IUCD.

Also, if either the woman or her husband begins having sexual relations with other partners without using condoms, this increases her risk of getting a sexually transmitted disease because IUCDs do not protect against them. STIs increase the risk of pelvic inflammatory disease, which leads to infertility or ectopic pregnancy.

10.3.7 Side Effects and Management

Table 10-5: Management of Side Effects for the Use of IUCD

Side Effect	Assessment	Management
Amenorrhoea (absence of vaginal bleeding or spotting)	Ask client- When she had her LMP When she last felt the IUCD strings If she has symptoms of pregnancy Rule out pregnancy (intrauterine or ectopic) by checking symptoms, and performing a pelvic exam (speculum and bimanual) and a pregnancy test (if indicated and available).	If the client is over 48 years of age, amenorrhoea could be due to menopause. If pregnancy is ruled out, no treatment is required except counselling and reassurance. Explain that blood does not build up in the uterus. Advise the client to return to the IUCD provider for further evaluation if amenorrhoea remains a concern. If pregnancy is less than 13 weeks (by LMP and/or exam) and strings are visible, explain that the IUCD should be removed to minimize risk of pelvic infection. If client agrees, remove IUCD. Advise her to return to the clinic if she has excessive bleeding, cramping, foul discharge or fever. If client is pregnant and wishes to continue pregnancy but does not want IUCD removed, advise on increased risk of miscarriage (spontaneous abortion) and infection and that pregnancy should be followed closely. Do not attempt to remove IUCD if: Strings are not visible or Pregnancy is greater than 13 weeks (by LMP and/or exam)

Side Effect	Assessment	Management
<p>Irregular bleeding with or without symptoms of pregnancy</p>	<p>Perform abdominal and pelvic (speculum and bimanual) examination to check for infection, pelvic pain or tenderness, palpable adnexal mass or enlarged uterus (consistent with pregnancy).</p>	<p>Reassure her that many women using IUCDs experience irregular bleeding. It is not harmful and usually becomes less or stops after the first several months of use.</p> <p>For modest short-term relief she can try NSAIDs such as ibuprofen (400 mg) or indomethacin (25 mg) 2 times daily after meals for 5 days, beginning when irregular bleeding starts.</p> <p>If irregular bleeding continues or starts after several months of normal bleeding, or you suspect that something may be wrong for other reasons, consider underlying conditions unrelated to method use.</p> <p>Ectopic pregnancy must be suspected in clients with irregular bleeding and/or abdominal pain (see Amenorrhoea and Heavy Bleeding in this section). Refer to appropriate facility for complete evaluation.</p>

Side Effect	Assessment	Management
<p>Bleeding (heavy/ prolonged) Amount: more than normal period Duration: more than 8 days</p>	<p>Perform pelvic examination (speculum and bimanual) to be sure that client does not have: Intrauterine or ectopic pregnancy Incomplete abortion Vaginal, cervical or pelvic infection</p> <p>Ask how much and how long she has been bleeding. Check for signs of marked anaemia: Pale conjunctivae or nail beds Rapid pulse more than 100/min.</p>	<p>Reassure her that many women using IUCD experience heavy or prolonged bleeding. It is generally not harmful and usually becomes less or stops after the first several months of use.</p> <p>If client has had IUCD less than 3 months: If exam is normal, reassure and give iron tablets (1 tablet daily for 1–3 months). Ask client to return in 3 months for another check. Use locally approved drugs, such as Ibuprofen, during bleeding episodes, if available, to decrease bleeding (400 mg 3 times daily for 5day) or Indomethacin 25 mg 2 times a daily for 5 days after meal or Tranexamic acid 1500mg 3 times daily for 3 days, then 1000 mg 2 times daily for 2 days.</p> <p>Provide iron tablets and advise to take food containing iron.</p> <p>If heavy or prolonged bleeding continues or starts after several months of normal bleeding or long after the IUCD was inserted, or if you suspect that something may be wrong for other reasons, consider underlying conditions unrelated to method use (see Unexplained vaginal bleeding).</p> <p>If bimanual examination shows enlarged or irregular uterus due to fibroids, tell client of the problem and refer for evaluation. Remove the IUCD if bleeding worsens and client is anaemic or requests removal, and help client select another method.</p> <p>If client has had IUCD more than 3 months: If examination is normal and bleeding intervals short (less than 3 days) determine if bleeding is a problem. If not, leave the IUCD in place. If the client is bothered, remove the IUCD and counsel for another method.</p>

Side Effect	Assessment	Management
Missing Strings	<p>Ask the client whether she knows if the IUCD has come out/been expelled.</p> <p>If client does not know if IUCD was expelled, ask her: When she had her LMP? When she last felt the strings? If she has any symptoms of pregnancy? If she used a backup method (e.g., condom) from the time she noticed the missing strings? Rule out pregnancy by symptoms, physical examination or pregnancy test, if necessary and available.</p> <p>If she returns while menstruating and strings are not visible, rule out lost IUCD or perforation.</p> <p>If she returns with delayed (more than 4 weeks) menses, check for pregnancy.</p>	<p>If client had noticed the IUCD fallen out, check for pregnancy. If not pregnant, insert new IUCD, or provide backup method and insert new IUCD during her next period.</p> <p>If exam reveals ectopic pregnancy (lower abdominal pain, spotting, cramping), refer to appropriate facility for complete evaluation.</p> <p>If exam reveals pregnancy, and strings are visible, see management under Amenorrhoea.</p> <p>If exam reveals pregnancy and strings are not visible, see management under Amenorrhoea.</p> <p>If strings are not found by carefully probing the cervical canal, client should use a non-hormonal contraceptive method and return with menses or in 4 weeks if her period does not start. Strings may come down with menses. If strings are seen, reassure client that strings are present and help her feel them.</p>

Side Effect	Assessment	Management
Expulsion or partial expulsion	Rule out pregnancy	<p>For complete expulsion</p> <p>If the client reports that the IUCD came out, discuss with her whether she wants another IUCD or a different method. If she wants another IUCD, she can have one inserted at any time it is reasonably certain she is not pregnant.</p> <p>If complete expulsion is suspected (for example, strings cannot be found on pelvic exam) and the client does not know whether the IUCD came out, refer for ultrasound (or x-ray, if pregnancy can be ruled out) to assess whether the IUCD might have moved to the abdominal cavity. Give her a backup method to use in the meantime.</p> <p>For partial expulsion</p> <p>If partially expelled, remove it completely and discuss with the client whether she wants another IUCD or a different method. If she wants another IUCD, she can have one inserted right away if it is reasonably certain she is not pregnant. If the client does not want to continue using an IUCD, help her choose another method.</p>
Partner complains about strings	Check to be sure that IUCD is in place (i.e., not partially expelled)	<p>Explain that this happens sometimes when strings are cut too short.</p> <p>Counsel client that one option is to cut strings even with the cervical opening, and inform her that she will no longer be able to feel strings. Her partner will not feel the strings, but it will make the removal procedure somewhat difficult (may require a specially trained provider).</p> <p>Record in chart that strings have been cut to the level even with cervix for future removal.</p>

Side Effect	Assessment	Management
<p>Severe lower abdominal pain (suspected Pelvic Inflammatory Disease)</p> <p>Cramping accompanied by abdominal tenderness, fever, flu-like symptoms, headache, chills, nausea or vomiting, painful intercourse, palpable pelvic mass</p>	<p>Perform abdominal and pelvic (speculum and bimanual) examination and STI testing if available.</p>	<p>If ectopic pregnancy is ruled out, assess for PID.</p> <p>If abdominal and pelvic examinations confirm uterine and/or adnexal tenderness, and/or microscopic testing supports diagnosis of PID, remove the IUCD and treat with antibiotics.</p> <p>If a pelvic examination is not possible, and she has a combination of the following signs and symptoms in addition to lower abdominal pain, suspect PID:</p> <ul style="list-style-type: none"> – Unusual vaginal discharge – Fever or chills – Pain during sex or urination – Bleeding after sex or between monthly bleeding – Nausea and vomiting – A tender pelvic mass – Pain when the abdomen is gently pressed (direct abdominal tenderness) or when gently pressed and then suddenly released (rebound abdominal tenderness) <p>If diagnosis equivocal, treat with antibiotics without removing IUCD. Observe carefully for results of antibiotic treatment (Follow NCASC guideline).</p> <p>If urethritis or cervicitis (purulent discharge or inflamed red cervix), check gram stain of cervical discharge.</p>
<p>Vaginal discharge</p>	<p>Check client's history for STIs and examine for vaginitis or purulent cervicitis or inflamed red cervix.</p> <p>Examine saline and KOH wet mounts of vaginal discharge for trichomonas, monilia (candida) and bacterial vaginosis.</p>	<p>Obtaining accurate history will facilitate diagnosis and treatment.</p> <p>If saline or KOH wet mounts are positive, treat approximately for specific organism. If simple vaginitis, it does not require removal.</p> <p>If positive for GNIDs, treat for gonorrhoea. If negative for GNIDs and purulent cervicitis or inflamed red cervix, treat for chlamydia. Obtain GC culture if available. Remove IUCD if gonorrhoea or chlamydia is confirmed or strongly suspected.</p>

Side Effect	Assessment	Management
Pregnancy with IUCD in situ*	1 st trimester pregnancy with visible IUCD string.	<p>If a woman is diagnosed with pregnancy with IUCD in situ, rule out ectopic pregnancy.</p> <p>When ectopic pregnancy has been ruled out, and if the pregnancy is in the first trimester: Counsel the woman on the risks of immediate removal of the IUCD: removing the IUCD slightly increases the risk of abortion; and leaving the IUCD in place can cause second trimester abortion, infection, and preterm delivery.</p> <p>If the woman requests removal, proceed with immediate removal if the strings are visible and the pregnancy is in the first trimester. If the strings are not visible, do an ultrasound to determine whether the IUCD is still in the uterus or has been expelled. If the IUCD is still in place, do not try to remove it.</p>
	1 st trimester pregnancy with non-visible string	<p>If the woman declines removal, provide antenatal care, close monitoring of the pregnancy by a qualified provider.</p> <p>Stress the importance of returning to the clinic immediately if she experiences signs of spontaneous abortion or infection (e.g., fever, low abdominal pain, and/or bleeding) or any other warning signs. Ensure that IUCD is removed at delivery.</p>
	Second trimester pregnancy	<p>The baby is very well protected by the sac filled with amniotic fluid inside the mother's womb. If a woman gets pregnant with an IUCD in place, the health provider will remove the IUCD immediately due to the risk of infection. If for some reason the IUCD is left in place during a pregnancy, it is usually expelled with the placenta or with the baby at birth.</p>

* Long-Acting Reversible Contraceptives Learning Package, Module 6: Copper Intrauterine Device (Copper T 380A), Facilitator Version, December 2017

CHAPTER 11

VOLUNTARY STERILIZATION PROCEDURES: MINILAPAROTOMY UNDER LOCAL ANAESTHESIA

11.1 INTRODUCTION

11.1.1 Voluntary Sterilization Procedures

Types of Voluntary Surgical Contraception

Depending upon the surgical approaches

- For women: (tubectomy)
 - Minilaparotomy
 - Laproscopic
- For men: (Vasectomy)
 - Non-Scalpel Vasectomy (NSV)
 - Conventional Vasectomy

11.1.2 Basics (Mechanism of Action)

In female surgical contraception, both the fallopian tubes are blocked or partially resected which prevents movement of the sperm and ova for fertilization. This is a permanent method of contraception.

11.1.3 Effectiveness

Minilaparotomy is effective in 99.8% typical use and 99.9% perfect use, with a surgical complication rate of less than 2%.

Failure usually is due to one of the following:

- Spontaneous recanalization of fallopian tube
- Incomplete procedure
- Incorrect surgical technique
- Most often the woman was already pregnant at the time of sterilization

11.1.4 Permanency

Female voluntary surgical contraception (Minilaparotomy or laparoscopy) procedures should be considered permanent (irreversible). Fertility does not return because sterilization generally cannot be reversed. Reversal surgery is difficult, expensive and not available in most areas. If performed, reversal surgery often does not lead to pregnancy. Therefore, couples considering VSC (Minilaparotomy or Laparoscopy) must be certain that they do not wish to have any more children.

11.2 PREREQUISITES

All women can undergo Minilaparotomy. No medical conditions prevent a woman from undergoing Minilaparotomy, but it should be done with caution, delay, or special arrangements.

Guiding principles for Minilaparotomy services:

- The operating physician and staff must be competent and certified (trained and skilled) in: the approved surgical techniques; the guidelines for conscious sedation and local anaesthesia; the management of emergencies; and standards of infection prevention practices.
- All instruments and equipment, including emergency equipment and supplies, must be in optimum working order before the start of the surgical procedure.
- Clients must be carefully counselled and screened, meeting WHO medical eligibility criteria 2015 and written informed consent must be obtained.
- Individual providers are not to exceed the following recommended number of procedures per day: not exceeding 5 procedures per hour per table per surgeon and 50 cases per day/table/surgeon.

11.2.1 Infection Prevention

Because Minilaparotomy is a surgical procedure, aseptic technique including good surgical technique must be followed to prevent infection at the incision site. For more detailed information, refer to Chapter Three: Infection Prevention and Operation Theatre Technique and Management reference manual.

11.2.2 Facility

- The facility should have sufficient size with enough rooms/space to accommodate Minilaparotomy services (adequate area for pre-procedure counselling and waiting area, instruments processing, operation theatre and post-operative area).
- Proper set-up to maintain infection prevention practices includes an excellent instrument/equipment sterilization system, client flow system that maintains privacy, hygiene and asepsis, and proper lighting.

See Appendix D III VSC Site Criteria for detailed facility requirements.

11.2.3 Equipment and Supplies

See Appendix E II Expendable Supply Estimates for Minilaparotomy

11.2.4 Category of Provider/Training

Minilaparotomy

This service is provided by a team of service providers and other staff led by trained physician.

Operation theatre staff (physician and scrub nurse) is to be certified in procedure by NHTC, GoN. Additional staff needed with skills and training to perform their job responsibilities are:

No.	Position	Function
1	Trained Physician/ Surgeon	Overall responsible. Ensure informed consent, oversee pre-operative client assessment, perform surgery, post-operative follow-up and manage complications, if any.

No.	Position	Function
1	Staff Nurse	Ensure appropriate infection prevention practices, client screening, ensure understanding and documentation of counselling, informed choice/informed consent, and post-operative care
1	Staff Nurse	OT management and assistance
2	ANM	Assist in OT
1	Clinic Helper	Cleaning and support sterilization activities
1	AHW	Registration and counselling and informed consent
1	Sweeper	Cleaning facilities
1	Driver	For transport purpose
	FCHW	For social mobilization

11.2.5 Record Keeping and Reporting

The provider should fill the following forms before and after providing VSC (Minilaparotomy):

- Master Register (HMIS No. 1.1) Appendix A (I)
- Health Service Card (HMIS No. 1.2) Appendix A (II)
- Referral / Transfer Card (HMIS 1.4) Appendix A (III)
- Face Sheet (HMIS No. 3.1) Appendix A (V)
- Sterilization Service Register (HMIS No. 3.4) Appendix A (VIII)

The provider should ensure that the medical record forms are completed, regularly maintained and reported to the Health Section, Municipality/ Health Office in the district.

11.3 SERVICE DELIVERY

11.3.1 Counselling and Informed Choice (For more detailed information refer to Chapter One.)

- Advantages/disadvantages of the method selected.
- Side effects for the method selected.
- Each step of the process including screening, preoperative medications, gowning, steps of surgery, post-operative pain, side effect, warning signs, recovery at home and follow-up.

The counsellor should discuss each client's feelings about ending fertility and assess the client's psychological readiness for the procedure and its consequences. Client doubts, fears or misconceptions should be identified and addressed.

Informed consent is the client's voluntary decision to undergo a sterilization procedure, in full possession and understanding of the relevant facts. In Nepal, the client's signature on an informed consent form (See Appendix D I) is the legal authorization for the procedure to be performed. Therefore, service providers should ensure that client has signed the informed consent form with full understanding.

Points to be discussed for informed consent

The 7 Points of Informed Consent

Counselling must cover all 7 points of informed consent. In case of Nepal, written consent must be obtained. To give informed consent to sterilization, the client must understand the following points:

1. Temporary contraceptives also are available to the client, including long-acting reversible contraceptives.
2. Voluntary sterilization is a surgical procedure.
3. There are certain risks of the procedure as well as benefits. (Both risks and benefits must be explained in a way that the client can understand.)
4. If successful, the procedure will prevent the client from ever having any more offspring.
5. The procedure is considered permanent and probably cannot be reversed.
6. The client can decide against the procedure at any time before it takes place (without losing rights to other medical, health, or other services or benefits).
7. The procedure does not protect against sexually transmitted infections, including HIV. (Informed consent form is in Annex DI)

FEMALE STERILIZATION FOR WOMAN WITH HIV

- Women who are infected with HIV, or are on antiretroviral (ARV) therapy can safely undergo female sterilization. Special arrangements are needed to perform female sterilization on a woman with advanced or severe clinical disease (WHO stage 3 and 4.) The procedure may need to be delayed if she has an HIV-related illness e.g. TB, fungal and other infections, etc.)
- Urge these women to use condoms in addition to female sterilization. Used consistently and correctly, condoms help prevent transmission of HIV and other STIs.
- No one should be coerced or pressured into having female sterilization, and that includes women with HIV.
- None of the clients should be rejected for surgery because of her HIV status if she fulfills the medical eligibility criteria.

Situational issues

The situations and conditions below require careful consideration and counselling before proceeding with provision of a permanent method.

If Minilaparotomy is inappropriate for the reasons below, the counsellor should further assess concerns and, if appropriate, help the client choose another method. In general, a woman is likely to regret sterilization if she has these conditions.

- Desires another child
- Shows excessive interest in reversal
- Has religious beliefs that would be violated
- Disagrees with/does not want to sign informed consent
- Is under pressure from another person
- Has marital problems
- Is single without children
- Has no children
- Has partner/s who oppose sterilization
- Is young
- Is not married

Also, for a woman, just after delivery or abortion is a convenient and safe time for voluntary sterilization, but women sterilized at this time may be more likely to regret it later. So effective counselling and informed choice must be considered.

The Decision about Sterilization Belongs to the Client Alone

Client can consult a partner and others about the decision to have sterilization and may consider their views, but the decision cannot be made by others. Family planning providers have a duty to make sure that the decision for or against sterilization is made by the client and is not pressured or forced by anyone.

11.3.2 Eligibility (See MEC Table for detail)

11.3.2.1 Indications

- The client seeks permanent method and wants no more children.
- The reproductive age group - **with adequate counselling there is no age restriction.**
- With adequate counselling there is no parity restriction.
- Do not need to have husband's/ guardian's permission.
- The client or partner has a medical condition that would lead to a high-risk pregnancy or serious health problems.
- Fit with medical eligibility criteria.

11.3.2.2 Precautions for Minilaparotomy

For the conditions below, Minilaparotomy services should be delayed until specific conditions resolve. Help client choose another method for the interim.

General medical issues:

- Acute systemic infection and local infections at operating site
- Depression: help client to choose another method and refer for treatment of depression
- STI
- Uncontrolled diabetes
- Uncontrolled hypertension

Caution should be taken in following conditions

- Previous abdominal or pelvic surgery
- Past pelvic inflammatory disease since last pregnancy
- Uterine fibroids
- Breast cancer

If the client has Female Specific medical issues, delay sterilization.

Related to pregnancy

- Current pregnancy
- 7–42 days post-partum
- Post-partum after a pregnancy with severe pre-eclampsia or eclampsia
- Serious post-partum or post-abortion complications (such as infection, hemorrhage, or trauma) except uterine rupture or perforation
- Hematometra (a large collection of blood in the uterus)
- Unexplained vaginal bleeding that suggests an underlying medical condition
- Pelvic inflammatory disease
- Purulent cervicitis, chlamydia, or gonorrhoea
- Pelvic cancers (treatment may make her sterile in any case)
- Malignant trophoblast disease

Special arrangement is needed if she has following conditions.

- Severe cirrhosis of the liver
- Hyperthyroidism
- Coagulation disorders (blood does not clot)
- Chronic lung disease (asthma, bronchitis, emphysema, lung infection)
- Pelvic tuberculosis
- HIV with advanced or severe clinical disease (see Female Sterilization for Women With HIV)
- Lupus with positive (or unknown) antiphospholipid antibodies, with severe thrombocytopenia, or on immunosuppressive treatment
- H/O allergy to local anesthesia (lignocaine)

Documenting denial of Minilaparotomy sterilization

When a client is judged unsuitable for Minilaparotomy, the client record should specify the reason(s) and should describe what action was taken. These records are to be kept at the service site.

Medical Eligibility Criteria

A: Accept, C: Caution, D: Delay and S: Special

A Category: Accept - There is no medical reason to deny the method to a person with this condition or in this circumstance.

C Category: Cautions - The method is normally provided in a routine setting, but with extra preparations and precautions.

Table 11-1: Medical eligibility

Condition	Explanation of condition	Medical Eligibility of female sterilization	
Pregnancy		D	
Age	Young age	C	
Parity	Nulliparous (has not given birth)	A	
	Parous (has given birth)	A	
Breastfeeding	< 6 weeks post-partum	*	
	≥ 6 weeks to < 6 months post-partum (primarily breastfeeding)	A	
	≥ 6 months post-partum	A	
Post-partum (not breastfeeding)	<21 days	*	
	21-42 days	*	
	>42 days	A	
Post-abortion	First trimester	*	
	Second trimester	*	
	Immediate post-septic abortion	*	
Past-ectopic pregnancy		A	
History of pelvic surgery		C*	
Smoking	Age <35 years	A	
	Age ≥35 years	<15 cigarettes/day	A
		≥15 cigarettes/day	A
Obesity	≥30 kg/m ³ body mass index (BMI)	C	

Condition	Explanation of condition	Medical Eligibility of female sterilization	
Blood pressure	Measurement not available	NA	
Cardiovascular disease	Multiple risk factors for arterial cardiovascular disease (old age, smoking, diabetes, and hypertension)	S	
	Hypertension: History of high blood pressure cannot be evaluated (including hypertension in pregnancy)	NA	
	Adequately controlled hypertension, where blood pressure CAN be evaluated	C	
	Elevated blood pressure (properly measured)	Systolic 140–159 or diastolic 90–99	C should be controlled before the procedure and monitored during the procedure
		Systolic ≥ 160 or diastolic ≥ 100	S should be controlled before the procedure and monitored during the procedure
	Vascular disease		S
	History of high blood pressure during pregnancy (where current blood pressure is measurable and normal)		A
	Deep venous thrombosis (DVT)/ Pulmonary embolism (PE)	History of DVT/PE	A
		Acute DVT/PE	D
		DVT/PE and on anticoagulant therapy	S
		Family history of DVT/PE (first-degree relatives)	A
		Major Surgery - with prolonged immobilization	D
		Major Surgery - without prolonged immobilization	A
		Minor Surgery - without prolonged immobilization	A
	Known thrombogenic mutations (e.g., factor V Leiden, prothrombin mutation; protein S, protein C, and antithrombin deficiencies)		A
Varicose veins		A	
Superficial venous thrombosis		A	
Ischemic heart disease	Current	D	
	History of ischemic heart disease	C	

Condition	Explanation of condition		Medical Eligibility of female sterilization
Stroke (history of cerebrovascular accident)			C
Dyslipidemia	Known dyslipidaemias without other known cardiovascular risk factors		A
Valvular heart disease	Uncomplicated		C
	Complicated ‡g (prophylactic antibiotics are advised before providing the method)		S* If taking anticonvulsants, see drug interaction
Systemic lupus erythematosus	Positive (or unknown) antiphospholipid antibodies		S
	Severe thrombocytopenia		S
	Immuno-suppressive treatment		S
Neurological conditions	Headaches – non-migrainous (mild or severe)		A
	Migraine without aura	Age <35 years	A
		Age ≥35 years	A
	Migraine with aura	At any age	A
Epilepsy		C	
Depressive disorders			C
Reproductive tract infection and disorders	Vaginal bleeding	Irregular pattern without heavy bleeding	A
		Heavy or prolonged bleeding (including regular and irregular patterns)	A
		Unexplained vaginal bleeding (suspicious for serious condition), before evaluation	D
	Endometriosis		C
	Benign ovarian tumours (including cysts)		A
	Severe dysmenorrhea		A
Gestational trophoblastic disease	Decreasing or undetectable β-hCG levels		A
	Persistently elevated β-hCG levels or malignant disease		D
Cervical ectropion			A
Cervical intraepithelial neoplasia (CIN)			A
Cervical cancer (awaiting treatment)			D
Breast disease	Undiagnosed mass		A
	Benign breast disease		A
	Family history of cancer		A

Condition	Explanation of condition		Medical Eligibility of female sterilization
Breast cancer ^g	Current		C
	Past, no evidence of disease for at least 5 years		A
Endometrial cancer ^g			D
Ovarian cancer ^g			D
Uterine fibroid	Without distortion of the uterine cavity		C
	With distortion of the uterine cavity		C
Anatomic abnormalities			-
Pelvic inflammatory disease (PID)	Past PID (assuming no current risk factors for STIs)	with subsequent pregnancy	A
		without subsequent pregnancy	C
	Current PID		D
Sexually transmitted infections (STIs)	Current purulent cervicitis, chlamydia, or gonorrhoea		D
	Other STIs (excluding HIV and hepatitis)		A
	Vaginitis (including trichomonas vaginalis and bacterial vaginosis)		A
	Increased risk of STIs		A
HIV/AIDS	High risk of HIV		A
	Asymptomatic or mild HIV clinical disease (WHO stage 1 or 2)		A
	Severe or advanced HIV clinical disease (WHO stage 3 or 4)		S Presence of an AIDS-related illness may require a delay in the procedure.
	Antiretroviral therapy – treated with nucleoside reserves transcriptase inhibitors (NRTIs)		-
	Antiretroviral therapy – treated with non-nucleoside reserves transcriptase inhibitors (NNRTIs)	Efavirenz (EFV) or nevirapine (NVP)	-
		Etravirine (ETR) or rilpivirine (RPV)	-
	Treated with protease inhibitors (PIs) ^{††}		-
Treated with integrase inhibitors (raltegravir [RAL])		-	
Schistosomiasis	Uncomplicated		A
	Fibrosis of the liver (if sever, see cirrhosis)		C
Tuberculosis	Non-pelvic		A
	Known pelvic		S

Condition	Explanation of condition		Medical Eligibility of female sterilization
Malaria			A
Endocrine conditions	Diabetes	History of gestational diabetes	A If blood glucose is not well controlled, referral to a higher-level facility is recommended.
		Non-vascular – non-insulin dependent diabetes	C Prophylactic antibiotics are advised before providing the method. If blood glucose is not well controlled, referral to a higher-level facility is recommended.
		Non-vascular – insulin dependent diabetes	C Prophylactic antibiotics are advised before providing the method. If blood glucose is not well controlled, referral to a higher-level facility is recommended.
		With kidney, eye, or nerve damage	S
		Other vascular disease or diabetes of > 20 years' duration	S
	Thyroid	Simple goitre	A
		Hyperthyroid	S
Hypothyroid		C	

Condition	Explanation of condition		Medical Eligibility of female sterilization
Gastrointestinal conditions	Gall bladder disease	Symptomatic – treated by cholecystectomy	A
		Symptomatic Medically treated	A
		Symptomatic-Current	D
		Asymptomatic	A
	History of cholestasis	Pregnancy related	A
		Past CoC related	A
	Viral hepatitis	Acute or flare	D
		Carrier	A
		Chronic	A
	Cirrhosis	Mild (compensated)	A
		Severe (decompensated)g	S liver function should be evaluated
	Liver tumours	Focal nodular hyperplasia	A
Hepatocellular		C liver function should be evaluated	
	Malignant (hepatoma)	C liver function should be evaluated	
Anemias	Thalassemia		C
	Sickle cell anaemia		C
	Iron-deficiency anaemia		D-if Hb <7 g/dl C= if Hb ³ 7 to < 10 g/dl
Drug interaction	Anticonvulsant therapy (barbiturates, carbamazepine, oxcarbazepine, phenytoin, primidone, topiramate)		-
		Lamotrigine	-
	Antimicrobial therapy	Broad-spectrum antibiotics	-

Condition	Explanation of condition		Medical Eligibility of female sterilization
		Antifungal and antiparasitic	-
		Rifampicin or rifabutin therapy	-

*Additional conditions relating to emergency contraceptive pills:

g This condition may make pregnancy an unacceptable health risk. Women should be advised that because of relatively higher pregnancy rates, as commonly used, withdrawal, fertility awareness methods, or female or male condoms may not be the most appropriate choice.

‡ Pulmonary hypertension, atrial fibrillation, history of subacute bacterial endocarditis

Category 1: Repeated use; rape; CYP3A4 inducers (e.g., rifampicin, phenytoin, phenobarbital, carbamazepine, efavirenz, fosphenytoin, nevirapine, oxcarbazepine, primidone, rifabutin, St. John's wort/*Hypericum perforatum*).

Category 2: History of severe cardiovascular complications (ischemic heart disease, cerebrovascular attack, or other thromboembolic conditions, and angina pectoralis).

+Additional conditions relating to female sterilization:

Caution: Diaphragmatic hernia; kidney disease; severe nutritional deficiencies; previous abdominal or pelvic surgery; concurrent with elective surgery. Delay: Abdominal skin infection; acute respiratory disease (bronchitis, pneumonia); systemic infection or gastroenteritis; emergency surgery (without previous counselling); surgery for an infectious condition; certain post-partum conditions (7 to 41 days after childbirth); severe pre-eclampsia/eclampsia; prolonged rupture of membranes (24 hours or more); fever during or immediately after delivery; sepsis after delivery; severe haemorrhage; severe trauma to the genital tract; cervical or vaginal tear at time of delivery); certain post-abortion conditions (sepsis, fever, or severe haemorrhage; severe trauma to the genital tract; cervical or vaginal tear at time of abortion; acute hematometra); subacute bacterial endocarditis; unmanaged atrial fibrillation. Special arrangements: Coagulation disorders; chronic asthma, bronchitis, emphysema, or lung infection; fixed uterus due to previous surgery or infection; abdominal wall or umbilical hernia; post-partum uterine rupture or perforation; post-abortion uterine perforation.

11.3.3 Client Assessment

The recommended information to include in a preoperative medical evaluation of a client is:

Demographic information

Includes client's name, address, age, spouse's name, occupation, and education, number of living children and age of the youngest child.

Medical history

- History of chronic/acute conditions: active tuberculosis, heart disease, hypertension, anaemia, diabetes, bleeding disorders, convulsions, psychiatric conditions, pelvic or abdominal surgery, pelvic inflammatory disease, vaginal discharge, urinary tract infections
- Recent injuries or infections
- Obstetric history: history of pregnancies, miscarriages, abortions, deliveries and any complications
- Menstrual history: date of LMP and description of menses
- Breastfeeding
- Family planning method use, side effects, reason for discontinuation
- Allergies to medication
- Epilepsy

Physical examination

The physical examination should include the following:

- Weight/Height
- Temperature
- Blood pressure
- Pulse

- Auscultation of heart and lungs
- Abdominal examination
- Pelvic exam—speculum and bimanual
- Pregnancy test if LMP and pelvic exam is suggestive of pregnancy
- Evaluation of the client's nutritional status
- Examination of the local operative area
- Other examinations as indicated by the medical history

Laboratory investigations

- Exam for haemoglobin, urinalysis for sugar and protein should be performed on all Minilaparotomy clients. Haemoglobin 7 gm/dl and above (or Hb 20% and above) is acceptable.
- Chest x-ray, pregnancy test should be conducted if indicated.
- For post-partum Minilaparotomy procedure, haemoglobin is required if there is bleeding after delivery.

In Nepal, the risk of dying from a pregnancy-related complication is much greater than the risk of dying from complications of the Minilaparotomy procedure. A large number of Nepalese women suffer from anaemia and to refuse them Minilaparotomy services solely on the criteria of borderline anaemia could defeat the purpose of providing them quality reproductive health services. A physician's decision to conduct Minilaparotomy on a severely anaemic client with Hb <7gm/dl or haematocrit (Hct) <20 should be based on her risk of pregnancy-related complications and her access to services versus the risk of operating on an anaemic client.

Conditions to be reviewed by physician

When on exam/history the women have abnormal finding(s), it must be reported to the physician, and the physician will examine the client and determine whether the procedure can be pursued. Below are conditions to be reviewed by the physician:

For all clients:

- A systemic or localized infection
- Heart disease
- Irregular pulse
- Respiratory problems
- Hypertension (should be controlled before surgery)
- Mass in the abdomen and pelvic area
- Diabetes (should be controlled before surgery)
- Bleeding disorders
- H/O previous abdominal or pelvic surgery

For post-partum client:

- Puerperal fever
- Prolonged rupture of membranes
- Hypertensive states, including pre-eclampsia and eclampsia
- Antepartum or post-partum haemorrhage
- Major trauma to the genital tract
- History of post-partum psychosis

Clients who have conditions that make the VSC procedure difficult or increase the risks should have their surgery performed by a highly skilled provider in a well-equipped facility, where general anaesthesia and other special requirements are available. The conditions include:

- Pelvic or abdominal adhesions due to previous surgery
- Obesity
- Abdominal wall or umbilical hernia (for immediate post-partum and laparoscopic procedures)
- Severe organ disease of heart, lung, kidney, liver
- Coagulation disorders
- Known pelvic TB

11.4 CLINICAL PROCEDURE

If there is no medical reason to delay, a woman can have the female sterilization procedure any time she wants if it is reasonably certain that she is not pregnant and there are no medical conditions that limit when, where, and how the female sterilization procedure should be performed.

Timing of procedure

Table 11-2: When to perform

Woman's situation	When to perform Minilaparotomy
Having menstrual cycles or switching from another method	<p>Any time of the month</p> <ul style="list-style-type: none"> • Any time within 7 days after the start of her monthly bleeding. No need to use another method before the procedure. • If it is more than 7 days after the start of her monthly bleeding, she can have the procedure any time it is reasonably certain she is not pregnant. • If she is switching from oral contraceptives, she can continue taking pills until she has finished the pill pack to maintain her regular cycle. • If she is switching from DMPA/LARC, she can have the procedure immediately.
No monthly bleeding	<ul style="list-style-type: none"> • Any time if it is reasonably certain she is not pregnant.
After childbirth	<ul style="list-style-type: none"> • Immediately or within 7 days after giving birth, if she has made a voluntary, informed choice in advance. • Any time 6 weeks or more after childbirth if it is reasonably certain she is not pregnant.
After miscarriage or abortion	<ul style="list-style-type: none"> • Within 48 hours after uncomplicated abortion, if she has made a voluntary, informed choice in advance.
After using emergency contraceptive pills (ECPs)	<ul style="list-style-type: none"> • The sterilization procedure can be done within 7 days after the start of her next monthly bleeding or any other time if it is reasonably certain she is not pregnant. Give her a backup method or oral contraceptives to start the day after she finishes taking the ECPs, to use until she can have the procedure.

11.5 PREOPERATIVE MEDICATION AND ANESTHESIA

Premedication serves to reduce fear and anxiety. It can provide analgesia, prevent post-operative nausea and vomiting, and induce amnesia. The goals of anaesthesia are to minimize psychological and emotional distress and trauma in the client and free her from pain and discomfort.

Local anaesthesia with sedation (so-called “modified local”) is safer than either general or conductive (spinal/epidural) anaesthesia, especially when these procedures are being performed in an outpatient setting. Use of general anaesthesia is not routinely recommended for VSC procedures.

Conscious sedation with local anaesthesia

When performing Minilaparotomy the operating physician should give conscious sedation with local anesthesia and choose either Option 1 or Option 2, not both (better to have this option because some of the gynecologists are reluctant to do ML without sedation – if have to choose between two, option-2 is preferable because of side effect management).

MINILAPAROTOMY
Conscious Sedation with Local Anesthesia: Option 1 (use if anesthetic backup is available)
Diazepam 5 mg orally for client <35 kg weight or Diazepam 10 mg orally for client ≥ 35 kg by weight Give 45 minutes before the operation
Pethidine 25 mg IV with Phenergen 12.5 mg IV with Atropine 0.6 mg IV To be administered together intravenously in operating theatre just before procedure with monitoring of vital signs every 5 minutes.
Xylocaine 1% 10–20 ml. Local infiltration to the skin and wait 1–2 minutes after infiltration to begin procedure.
Conscious Sedation with Local Anesthesia: Option 2
Diazepam 5 mg orally for client <35 kg weight or Diazepam 10 mg orally for client ≥ 35 kg by weight Give 45 minutes before the operation.
Pentazocine 30 mg IV with Atropine 0.6 mg IV (optional) To be administered together intravenously in OT just before procedure with monitoring of vital signs every 5 minutes.
Xylocaine 1% 10–20 ml. Local infiltration to the skin and wait 1–2 minutes after infiltration to begin procedure.
Conscious Sedation with Local Anesthesia: Option 3
Diazepam 5 mg orally for client <35 kg weight or Diazepam 10 mg orally for client ≥ 35 kg by weight Give 45 minutes before the operation. Inj. Xylocaine 1% 20 ml
Xylocaine 1% 10–20 ml. Local infiltration to the skin and wait 1–2 minutes after infiltration to begin procedure.

Note: Those who are using Narcotic analgesic must have antidote, intubation facility with back up referral. The use of IV diazepam for premedication is not recommended.

Monitoring client during procedure for client's administered conscious sedation

Monitoring and recording of vital signs must take place before, during and after the operation until the client has fully recovered.

Preoperative: Blood pressure, pulse and respiration should be monitored and recorded before and after the preoperative dose of sedative is given. This provides the baseline data for the client.

Intraoperative: To assess the status of analgesia, a staff member should converse with the client continuously. During surgery, the medical team should monitor and record blood pressure, pulse and respiration at least every 5 minutes.

Post-operative: Blood pressure, pulse and respiration must be monitored and recorded at least every 15 minutes until stable (they have returned to preoperative levels). Under no circumstances should the client be left alone. The client must be observed constantly during the post-operative period. Once the client is stable, vital signs should be monitored once every hour until she is fully awake.

Clinical staff should be observant for the following signs of distress:

- Excessive somnolence
- Breathing rate of less than 10 per minute
- Hyperventilation
- Systolic blood pressure less than 90 mm Hg
- Rapid (over 100) or weak pulse
- Pallor or cyanosis

For further information about preoperative monitoring, refer to the Operating Theatre Technique and Management reference manual.

11.6 MANAGEMENT OF COMPLICATIONS

Anaesthesia complications

Major complications may occur with general and local anaesthesia for Minilaparotomy. Serious complications i.e. less than 2% are likely to occur as a result of overdose or improper administration of anaesthesia. Inadequate monitoring is often a factor when a complication has become serious before it is recognized. Refer to the Management of Emergencies in Family Planning Services in Nepal reference manual.

Surgical emergencies

The surgical team should manage surgical emergencies at the operative site in accordance with the techniques outlined in the Management of Emergencies in Family Planning Services in Nepal reference manual.

Problems reported as complications

Problems affect woman’s satisfaction with female sterilization. They deserve the provider’s attention. If the client reports complications of the procedure, listen to her concerns, give advice and support and, if appropriate, treat. Make sure she understands the advice and agrees.

Table 11-3: Management of Complications during Minilaparotomy

Complications	Possible cause	Assessment	Management
During procedure			
Bladder injury	Failure to ensure bladder was emptied before surgery Inappropriate location of incision	<p>Intraoperatively</p> Clear fluid welling up into the incision or operative site, fluid smells urine	<p>Intraoperatively</p> Insert a Foley catheter and continue for 7-10 days Instil sterile solution into bladder through catheter Repair injury in two layers using continuous suture of fine catgut/vicryl (2.0/3.0) with atraumatic needle Continue ML/LA if injury is minor Begin course of antibiotics Hospitalize if injury is extensive
		<p>Sight of the rugal folds of bladder mucosa</p> <p>Post-operatively</p> Presence of hematuria Suprapubic pain Fever as signs of infection	
		Determine presence of hematuria, other signs of internal injury.	Manage as outlined in the Management of Emergencies in Family Planning Services in Nepal reference manual.

Complications	Possible cause	Assessment	Management
During procedure			
Bowel injury	Failure to feel the grasped peritoneal tissue of the fold to ensure bowel is not adherent before opening Failure to look for translucence of the peritoneum fold before opening Quick and deep entry through the thin abdominal wall at the umbilicus during post-partum procedures	Intraoperatively Visualization of bowel serosa or muscularis Visualization of bowel contents Abdominal pain Post-operatively Abdominal pain that increases in severity Vomiting Failure to pass flatus Acute illness Fever with rapid pulse (early) Return of temperature to normal or subnormal (later) Sign and symptoms of peritonitis Abdominal distension Abdominal tenderness Abdominal rigidity and rebound tenderness	Intraoperatively Repair in two layers using interrupted 2.0/3.0 vicryl/ chromic catgut with atraumatic needle. If injury is superficial (serosal layer only), allow client to rest an extra hour. Discharge with instructions to return immediately if pain or fever begins. Follow up to monitor any change in condition over next 48 hours. If injury is through to bowel lumen, initiate IV antibiotics. Hospitalize for observation following repair. If faecal matter is expelled into the abdomen, lavage the peritoneal cavity with sterile solution. Complete ML/LA after repairing bowel.
Shock or acute distress (very rare)	Pain Drug reaction	Check for increased respiration and pulse, decreased blood pressure, evidence of hemodynamic instability	Manage according to cause Manage as outlined in the <i>Management of Emergencies in Family Planning Services in Nepal reference manual</i> .
Intraoperative Haemorrhage (injury to mesosalpinx)	Rough handling of tissue, use of not recommended instruments (e.g. Allis forceps instead of babcock)	Determine presence of injury to mesosalpinx	Manage as outlined in the <i>Management of Emergencies in Family Planning Services reference manual</i> .

Complications	Possible cause	Assessment	Management
During procedure			
Uterine perforation	<ul style="list-style-type: none"> • Improper insertion of uterine elevator • Rough manipulation of uterine elevator • Post-abortion uterus still soft 	<ul style="list-style-type: none"> • Tip of elevator protruding through uterus • Inability to elevate the uterus against the abdominal wall • Superficial palpation of the tip through the abdominal wall • Metallic sound of the tip against the abdominal retractors • Bleeding 	<ul style="list-style-type: none"> • If no bleeding and patient is stable complete procedure and observe patient for few hours. • If uterus is anteverted, elevator may be left in place while ML/LA completed. Caution required if uterus is manipulated. • If uterus is retroverted, reposition elevator, rotating the uterus to anteverted position, then complete ML/LA. • After ML/LA completed, remove elevator and examine perforation site for bleeding. • If fresh bleeding occurs, control with mattress suture using chromic catgut/vicryl 2.0/3.0. • If bleeding controlled, close the abdomen and observe the client for extra 1 to 2 hours. • Initiate course of antibiotics. • Consider hospitalization if continuous bleeding is suspected or if posterior perforation with vessel injury occurred.
After procedure			
Wound Infection	Failure to observe/practice appropriate IP practice	Confirm presence of infection or abscess.	If skin infection is present, clean the infected area, treat with Amoxicillin/ Cloxacillin 500 mg 8 hourly for 5-7 days. If abscess is present, drain and treat as indicated. Ask the client to return after 7 days or SOS.

Complications	Possible cause	Assessment	Management
After procedure			
Post-operative Fever	Failure to instruct clients in proper care of wound Intraoperative poor IP practices and complications	Determine source of infection.	Treat infection based on findings.
Haematoma (subcutaneous)	Unrecognized injury to blood vessels, bleeding beneath skin surface	Determine presence of infection or abscess.	Apply warm, moist packs to site. Observe—usually will resolve over time with pressure but may require drainage if extensive.
Pain at incision site	Subcutaneous collection of pus, serum or blood	Determine presence of infection or abscess. Check for fluctuance expression of pus and blood or serum, severe induration	Treat based on findings. (e.g., moist heat, analgesics).
Superficial Bleeding (skin edges or subcutaneously)	Failure to maintain hemostasis during surgery	Determine presence of infection or abscess	Treat based on findings. Intraoperatively and Post-operatively Place secure pressure dressing on wound
Haemorrhage External Internal	Bleeding from incisional wound (abdominal wall) Bladder injury, bowel injury and uterine perforation	Determine severity of bleeding and site of bleeding Continue procedure accordingly	If bleeding persists, reopen wound under local anaesthesia and clamp and ligate the bleeding points

11.6.1 Preoperative, Post-operative and Discharge Care and Client Information

Preoperative client information

At community level

Community health staff should inform the clients to prepare for surgery by:

- Receiving counselling about family planning procedures and specifics about Minilaparotomy
- Bathing, wearing clean and loose clothes
- Fasting for 8-12 hours before surgery and taking no medications for 24 hours prior to surgery unless prescribed by a physician
- Being accompanied to Minilaparotomy site and home after the procedure

At Minilaparotomy site

- Counsellor and Minilaparotomy staff to inform the client of the following:
- Advantages and disadvantages
- The steps of the operation, including information on sedation/anaesthesia, screening, lab tests, what to expect in operating theatre, expectations about pain/discomfort, emptying bladder before surgery
- Removal of jewellery, nail polish, hairpins, eye glasses and dentures before surgery

Post-operative client information

- Medications and dosages
- Discharge information—resumption of activities, wound care and warning signs (signs of infection, bleeding pain), referral site for complications
- Timing of follow-up visit
- Printed post-operative information to be given on discharge

Post-operative danger signs

- Fever (greater than 100.4°F/38°C)
- Dizziness with fainting
- Abdominal pain that is persistent or increasing
- Bleeding or fluid coming from the incision

Post-operative care

Minilaparotomy staff should monitor the client's vital signs every 15 minutes after surgery until she is stable. Discharge may occur after 2 hours post-procedure when the client's vital signs are stable, she has eaten, has passed urine, is able to dress herself and is ambulatory.

Required client discharge instructions are outlined in Appendix E III. For additional information on post-operative care, refer to the *Minilaparotomy under Local Anaesthesia for Nepal reference manual*.

Post-operative medications

- Analgesics tablets for 3 days
- **Antibiotics are not recommended for routine use with Minilaparotomy.** Antibiotics should only be given if there is bowel injury, documented infection or severe breach in infection prevention practices/aseptic technique.

Post-procedure follow-up

The follow-up visit is to take place within 7 days of surgery. The client should return to the site where the procedure was conducted or to a referral site as instructed by the discharge staff.

MOBILE MINILAPAROTOMY SERVICES

11.7 BASICS

Mobile services available in Nepal

High quality voluntary surgical contraception services should be available and accessible to all people, regardless of where they live. Because mobile services are usually delivered far from comprehensive emergency facilities, quality standards in these settings should be maintained as they are in permanent facilities.

Types

- A trained surgical team from outside the district travels to district health care facilities that do not offer voluntary surgical contraception to their clients. The team brings with it any equipment and supplies that are unavailable at the local sites.
- A trained surgical team travels from the district centre to areas that do not have voluntary surgical contraceptive services and performs surgery in temporary medical settings, such as schools and community centres. While the team brings with it almost all necessary equipment and supplies it also uses tables, lamps and other items available at the local sites.

11.8 PREREQUISITES

11.8.1 Personnel

Mobile teams must be staffed by trained, skilled and experienced personnel. Because a mobile team often does not have ready access to the backup emergency facilities available in most urban areas, the team's personnel must be skilled at recognizing problems promptly and managing them immediately.

Sometimes mobile teams go into the field sporadically, perhaps only a few weeks or months out of a year. If this is the case, members of the surgical team may need practice or retraining between their trips, especially if they do not routinely perform voluntary surgical contraception year-round. Surgical skills diminish if they are not used.

Cases should not exceed 50 Minilaparotomy procedures per day per surgeon.

11.8.2 Equipment and Supplies

Mobile teams must go into the field with all the supplies and equipment needed to manage surgical emergencies. In addition, they should have formal relationships with established medical facilities in the areas where they work. In this way, clients who need continued medical treatment after emergencies will have a way to receive it. The local backup facilities must have the supplies,

equipment and trained staff required to handle complications following voluntary surgical contraception (See Appendix D II) for emergency drugs and equipment). For more information, refer to the Management of Emergencies in Family Planning Services in Nepal reference manual.

11.9 STANDARD OF SERVICES

All Minilaparotomy standards outlined in this chapter apply to both mobile and static service sites.

LAPAROSCOPIC FEMALE STERILIZATION

11.10 INTRODUCTION

Laparoscopic female sterilization involves inserting a long, thin tube containing lenses into the abdomen through a small incision. This laparoscope enables the doctor to reach and block or cut (what was practiced in the past was only ligation) the fallopian tubes in the abdomen.

This was one of the most widely used female sterilizations in late 90's and early part of this century. As popularity of the Minilaparotomy increased particularly in VSC camps, its number decreased.

11.10.1 Preparation

All the instruments needed to perform laparoscopic tubal occlusion should be made available and in working condition. A list of equipment and instruments for laparoscopic tubal occlusion is given in Appendix E (III). In addition, check that all instruments and other items have been sterilized or high-level disinfected.

The surgeon assesses making a small cut near belly bottom and inserts laparoscope to see fallopian tubes and perform surgery.

Procedures

The provider uses proper infection-prevention procedures at all times (see Infection Prevention).

1. The provider performs a physical examination and a pelvic examination. The pelvic examination is to assess condition and mobility of the uterus.
2. The woman usually receives light sedation and analgesia to relax her. She stays awake. Local anesthetic is injected under her navel. She will not experience serious pain.
3. The provider places a special needle into the woman's abdomen and, through the needle, inflates (insufflates) the abdomen with gas or air. This raises the wall of the abdomen away from the pelvic organs.
4. The provider makes a small incision (about one centimeter) in the anesthetized area and inserts a laparoscope. A laparoscope is a long, thin tube containing lenses. Through the lenses the provider can see inside the body and find the 2 fallopian tubes.
5. The provider inserts an instrument through the laparoscope (or, sometimes, through a second incision) to close off the fallopian tubes.
6. Each tube is closed with a clip or a ring, or by electric current applied to block the tube (electrocoagulation).

7. The provider then removes the instrument and laparoscope. The gas or air is let out of the woman's abdomen. The provider closes the incision with stitches and covers it with an adhesive bandage.
8. The woman receives instructions on what to do after she leaves the clinic or hospital. She usually can leave in a few hours.

Comparison between Minilaparotomy and Laparoscopic Female Sterilization

To ensure broad access to female sterilization, the method offered at a service site should be safe, simple, highly effective and relatively pain-free, affect only fertility, inexpensive, suitable to be performed as an ambulatory procedure and cause minimal tubal damage in order to facilitate reversibility. Minilaparotomy and Laparoscopy both fit these criteria and are acceptable procedures for reaching the fallopian tubes (WHO, 1992).

In large-scale studies and service settings, both methods have proven to be equally safe and effective. The two techniques are compared in the following Table.

Table 11-4: Comparison of Minilaparotomy Tubectomy and Laparoscopic Tubal Occlusion

Points	Minilaparotomy Tubectomy	Laparoscopic Tubal Occlusion
Instruments and equipment	Requires few inexpensive surgical instruments	Requires delicate endoscopic equipment
Timing	Can be performed post-partum, post-abortion or at any time (interval procedure) after ruling out pregnancy	Can be performed only for interval and after first-trimester abortion procedures
Post-operative pain	Mild post-operative abdominal pain	Mild post-operative abdominal pain Chest and shoulder pain may also result due to irritation of diaphragm by gaseous distention.
Post-operative complications	Risk of minor complications such as wound infection	Risk of major complications such as bowel or vascular injury that may require additional surgery
Recovery time	4-6 hours	4-6 hours

Note: Source: Reference Manual for Female Sterilization, Family Planning Division, MoHFW, Govt of India, Nov 2014)

STERILIZATION DURING CAESAREAN SECTION

For women who had a caesarean delivery, sterilization can be done through the same abdominal incision that was made for delivery of the baby.

After delivery of the baby and placenta and closure of uterus, the fallopian tubes are ligated and resected. The fallopian tubes are brought up through the incision. The tubes are cut and closed. Often, the type of anesthesia used for the delivery can be used for this. Studies have shown that B/L salpingectomy without oophorectomy is proven for lowering the risk of ovarian cancer.

It is important that, if sterilization is to be performed with caesarean, counseling should be done well in advance of the procedure even during ANC visits. It is also important to inform that sterilization at caesarean section is less likely to/ amenable to successful future reversal of female sterilization. In addition to general consent for surgery, *Informed Consent of VSC* should be taken. These forms should be completed before scheduling the procedure. It is also important that clients have the right to change their minds so must be reconfirmed before the procedure.

Studies have reported that the incidence of regret and dissatisfaction is increased when sterilization has been performed concomitantly with caesarean section. Tubal occlusion should ideally be performed at an appropriate interval after pregnancy wherever possible. Should tubal occlusion be requested post-partum, women should be made aware of the increased rate of regret and the possible increased failure rate.

(Sources – ACOG Committee Opinion, No 205, Aug 1998; ACOG Frequently Asked Question (FAQ052, Contraception-Postpartum Sterilization, May 2016, RCOG, Female Sterilization, Consent Advice No 2, Feb 2016)

RECANALIZATION (TUBECTOMY/TUBAL LIGATION REVERSAL)

Minilaparotomy tubectomy is one of the common family planning methods in Nepal and considered a permanent method. But there may be small number of women who may need reversal of tubectomy. This may be due to change in marital status or want of more children and accidental death of the children.

Tubal ligation reversal is a procedure to revive fertility once a female has had a procedure where fallopian tubes are either cut or blocked.

Counselling

Before the advent of and improvement in areas of in-vitro fertilization (IVF), surgical tubal anastomosis was the only option. Discussion on alternative ways available for conceptions should be discussed. Success rates after reversal surgery (and its types) should be discussed. Success (pregnancy) rates are from 44% to as high as 81%.

Patients whose final tubal length is less than 4 cm and who have marked luminal discrepancy tend to have lower success rates.

Sterilization (tubal ligation) procedures that involve the use of clips, rings, or Pomeroy mid-segment resection allow for longer, less damaged tubal segments than do coagulation techniques.

Preoperative assessment

It is important that undergoing tubal sterilization reversal should have a basic infertility evaluation.

For availability of sperms, one important aspect is to do basic semen analysis of the partner (husband). Functional assays for sperm quality can include the sperm penetration assay or the hemizona-binding assay^{12, 13} if the basic semen analysis finding is abnormal.

For availability of egg, basal body temperature (BBT) records, luteinizing hormone testing, endometrial biopsy, or serum progesterone values are key indicators.

And before surgery, hysterosalpingography (HSG) and laparoscopy should be performed to assess the likelihood of a successful procedure.

Procedure

During reversal, the blocked segments of the fallopian tubes are reconnected (re-anastomosis) to the rest of the two obstructed segments of fallopian tubes so that egg can move and meet male partner's sperms and fertilization can occur. Tubal re-anastomosis is classified according to the anatomic location of tubal damage and surgical site: cornual-isthmic, isthmic-isthmic, isthmic-ampullary, ampullary-ampullary, and ampullary-infundibular.

As this is microsurgery, so it should involve methods of minimizing tissue trauma during surgery (adequate exposure of the pelvis, magnification of tissue and irrigation of tissue, appropriate hemostasis, use of microsurgical instruments, fine non-reactive sutures and avoiding permanent stents or other foreign bodies).

Post-operative care

In general, clients can go home after few hours' (2-4 hours) rest following the surgery. Taking painkiller may be needed to manage pain. After the surgery, women are advised to take rest and come back to normal routine in 2-3 weeks.

Depending upon situation, some clients may need or choose to stay in hospital for few days.

Patients are seen for a routine post-operative check within 3–4 weeks post-operatively. Pregnancy may be attempted after one normal menstrual cycle. Patients are advised to chart their cycles carefully. Ovulation-stimulating agents are recommended if cycles are irregular. If, after 4–6 months of timed intercourse, the patient is not pregnant, a follow-up HSG is performed to document the persistence of tubal patency. Routine HSG testing is not recommended.

Complications

Complications of tubal re-anastomosis are similar to those of other pelvic surgery. Infection and bleeding, although rare, are possibilities.

Prophylactic antibiotics?

Ectopic pregnancy is a concern after tubal re-anastomosis.

Inability to conceive after tubal re-anastomosis can result from partial tubal occlusion or from subtle structural tubal disease such as ciliary dysfunction. The latter is of particular concern if electrocautery was used to perform the sterilization procedure.

Reference

- https://www.glowm.com/section_view/heading/Reversal%20of%20Female%20Sterilization/item/405
- <https://www.selectivf.com/tubal-ligation-reversal/>
- <https://www.healthline.com/health/pregnancy/tubal-ligation-reversal>

CHAPTER 12

VOLUNTARY STERILIZATION PROCEDURES: NO SCALPEL VASECTOMY

12.1 INTRODUCTION

12.1.1 Voluntary Sterilization Procedure

This is permanent contraception for men who do not want more children. In Nepal, the common method of vasectomy is called No Scalpel Vasectomy (NSV).

12.1.2 Effectiveness

Among the partners of men who have vasectomies, pregnancy rates are far less than 1 per 100 women over the first year after their partners have had a vasectomy. If no sperm is found in semen examined 3 months after the procedure, 1 woman in every 1000 of these men's partners become pregnant in the first year.

Among the partners of men who do not have their semen examined, pregnancy rate is still less than 2 per 1000 women.

However, small failures can happen usually due to one of the following:

- Spontaneous recanalization of vas deferens
- Inability to complete procedure
- Incorrect surgical technique

Vasectomy is not fully effective for 3 months after the procedures. Some pregnancies occur during this period if they do not use effective backup method.

12.1.3 Permanency

NSV is considered permanent (irreversible). In Nepal, the microsurgical services required to reverse NSV procedure are very limited. Even when such services are available, the client may not be a suitable candidate for this surgery or a reversal attempt may not be successful. Therefore, couples considering NSV should be certain that they do not wish to have any more children.

12.2 PREREQUISITES

Guiding principles for NSV services:

- The operating physician must be trained and skilled in: the approved surgical techniques; the guidelines for local anaesthesia; the management of emergencies; and standards of infection prevention practices.
- All instruments and equipment, including emergency equipment and supplies, must be in optimum working order before the start of the surgical procedure.

- Clients must be carefully counselled and screened, meet medical eligibility criteria and written informed consent must be obtained.
- Individual providers are not to exceed the following recommended number of procedures per day: 5 procedures per hour per surgeon, not exceeding 50 procedures per surgeon per day.

12.2.1 Infection Prevention

Because NSV is a surgical procedure, aseptic technique including good surgical technique must be followed to prevent infection at the puncture site. For more detailed information, refer to Chapter Three: Infection Prevention. In addition, refer to *Operation Theatre Technique and Management* reference manual.

12.2.2 Facility

- The facility should have sufficient space with enough rooms to accommodate NSV services (Adequate area for pre-procedure counselling, waiting area, instrument processing, operation theatre and post-operative area).
- Proper set-up to maintain infection prevention practices includes an excellent instrument/equipment sterilization system, client flow system that maintains privacy, hygiene and asepsis, and proper lighting and privacy.

See Appendix D III VSC Site Criteria for detailed facility requirements.

12.2.3 Equipment and Supplies

See Appendix F (II) Facilities and Equipment for Vasectomy

12.2.4 Category of Provider/Training

NSV

This service is provided by a team of service providers and other staff led by a trained physician. The provider should be trained and certified in NSV. Such training should be based on the NHTC, GoN training curriculum.

The minimum number of staffs required to safely conduct a no scalpel vasectomy operation is as follows:

Table 12-1: Staff Requirement

No.	Position	Function
1	Trained Doctor	Oversee preoperative assessment and perform surgery
1	HA/Sr. AHW/ Staff Nurse/Sr ANM	Perform preoperative assessment, ensure understanding and documentation of informed choice/informed consent and assist the surgeon in OT and prepare OT
1	Clinic Helper	Work in the OT/sterilization, instrument cleaning and packing
1	ANM/AHW	Registration, counselling and postoperative cares
1	Driver	Assist in transportation services
	FCHV	Assist in advocacy and social mobilization

12.2.5 Record Keeping and Reporting

The provider should fill the following forms before and after providing NSV:

- Master Register (HMIS No. 1.1) Appendix A (I)
- Health Service Card (HMIS No. 1.2) Appendix A (II)
- Referral / Transfer Card (HMIS 1.4) Appendix A (III)
- Fact Sheet (HMIS No. 3.1) Appendix A (V)
- Sterilization Service Register (HMIS No. 3.4) Appendix A (VIII)

The provider should ensure that the medical record forms are completed, regularly maintained and reported to the Health Section, Municipality/ Province Health Office in the district.

12.3 SERVICE DELIVERY

12.3.1 Counselling And Informed Choice (For more detailed information refer to Chapter One.)

Counselling is of particular importance in providing NSV services, because the method is surgical and permanent. NSV involves consequences, risks and concerns that need to be discussed with each client.

- Discuss other temporary and permanent family planning methods that are available.
- The client must be counselled in a language that s/he understands. Privacy must be maintained during counselling.
- Ensure that client has decided to use the method without any coercion and incentives.
- The following information should be understood by clients:
 - Side effects for the method selected.
 - Advantages/disadvantages of the method selected.
 - Each step of the process including screening, preoperative medications, gowning, operating theatre, post-operative pain, side effect, warning signs, recovery at home and follow-up.

The counsellor should discuss each client's feelings about ending fertility and assess the client's psychological readiness for the procedure and its consequences. Client doubts, fears or misconceptions must be identified and addressed. Clients may have concerns about his sexual ability, so it is important to address by providing information.

Informed consent is the client's voluntary decision to undergo a sterilization procedure, in full possession and understanding of the relevant facts. In Nepal, the client's signature on an informed consent form (See Appendix D I) is the legal authorization for the procedure to be performed. Therefore, service providers should ensure that client has signed the informed consent form with full understanding.

Points to be discussed for informed consent

Counselling must cover all 7 points of informed consent. In case of Nepal, written consent must be obtained. To give informed consent to sterilization, the client must understand the following points:

1. Temporary contraceptives also are available to the client, including long-acting reversible contraceptives.
2. Voluntary sterilization is a surgical procedure.
3. There are certain risks of the procedure as well as benefits (Both risks and benefits must be explained in a way that the client can understand).

4. If successful, the procedure will prevent the client from ever having any more children.
 5. The procedure is considered permanent and probably cannot be reversed.
 6. The client can decide against the procedure at any time before it takes place (without losing rights to other medical, health, or other services or benefits).
 7. The procedure does not protect against sexually transmitted infections, including HIV.
- (Informed consent form is in Annex DI.)

VASECTOMY FOR MEN WITH HIV

- Men who are living with HIV infections or are on antiretroviral (ARV) therapy can safely have a vasectomy. Special arrangements are needed to perform vasectomy on a man with (WHO clinical stage 3 and 4).
- Vasectomy does not prevent transmission of HIV.
- Urge these men to use condoms in addition to vasectomy. Used consistently and correctly, condoms help prevent transmission of HIV and other STIs.

No one should be coerced or pressured into getting a vasectomy, and that includes men with HIV.

Situational issues

1. If NSV is inappropriate for the reasons below, the counsellor should further assess concerns and, if appropriate, help the client choose another method.
2. Desires another child
3. Shows excessive interest in reversal
4. Has religious beliefs that would be violated
5. Disagrees with/does not want to sign informed consent
6. Is under pressure from another person
7. Has marital problems
8. Is single without children
9. Has no children
10. Is unmarried
11. Has partners who oppose sterilization
12. Is young

The Decision about Sterilization Belongs to the Client Alone

Client can consult a partner and others about the decision to have sterilization and may consider their views, but the decision cannot be made by others. Family planning providers have a duty to make sure that the decision for or against sterilization is made by the client and is not pressured or forced by anyone.

12.3.2 Eligibility (See WHO MEC table 12-2)

12.3.2.1 Indications for NSV

- The client seeks permanent method and wants no more children.
- The client or partner has a medical condition that would lead to a high-risk pregnancy or serious health problems.
- Client is willing to get NSV but who does not have spousal permission.

SPECIAL CONDITION

- With adequate counselling there is no age restriction. Even though it is so if client is a minor then seek suggestion from higher authority/FWD.
- With adequate counselling there is no parity restriction.

12.3.2.2 Precautions for NSV

The situations and conditions below require careful consideration and counselling before proceeding with provision of a permanent method.

General medical issues

For the conditions below, NSV services should be delayed until specific conditions resolve. Help client choose another method for the interim.

- Acute systemic infection
- Depression: help client to choose another method and refer for treatment of depression
- STI
- Uncontrolled diabetes, hypertension

Medical issues

- Local skin or scrotal infections
- Large varicocele
- Filariasis
- Intra-scrotal mass
- Inguinal hernia
- Crypto-orchidism
- Large hydrocele (As VAS deference could not be palpated - vasectomy can be performed in a single setting while operating for hydrocele)

Documenting denial of NSV

When a client is judged unsuitable for NSV, the client record should specify the reason(s) and should describe what action was taken. These records are to be kept at the service site.

Medical Eligibility Criteria

A: Accept, C: Caution, D: Delay and S: Special

A - Accept: There is no medical reason to deny sterilization to a person with this condition.

C - Caution: The procedure is normally conducted in a routine setting, but with extra preparation and precautions.

C - Delay: The procedure is delayed until the condition is evaluated and/or corrected. Alternative temporary methods of contraception should be provided.

S - Special: The procedure should be undertaken in a setting with an experienced surgeon and staff, equipment needed to provide general anaesthesia, and other backup medical support. For

these conditions, the capacity to decide on the most appropriate procedure and anaesthesia regimen is also needed. Alternative temporary methods of contraception should be provided if referral is required or there is otherwise any delay.

Table 12-2: Medical eligibility

Condition	Explanation of condition	Medical eligibility for vasectomy
Young age	Clarification: Young men, like all men, should be counselled about the permanency of sterilization and the availability of alternative, long-term, highly effective methods. Evidence: Men who underwent vasectomy at young ages were more likely to have the procedure reversed than those who underwent vasectomy at older ages (2).	C
Depressive disorder		C
High risk of HIV	Clarification: No routine screening is needed. Appropriate infection prevention procedures, including universal precautions, must be carefully observed with all surgical procedures. The use of condoms is recommended following sterilization.	A
Asymptomatic or mild HIV clinical disease (WHO stage 1 or 2)	Clarification: No routine screening is needed. Appropriate infection prevention procedures, including universal precautions, must be carefully observed with all surgical procedures. The use of condoms is recommended following sterilization.	A
Severe or advanced HIV clinical disease (WHO stage 3 or 4)	Clarification: The presence of severe or advanced HIV clinical disease may require that the procedure be delayed.	S
Diabetes	Individuals with diabetes are more likely to get post-operative wound infections. If signs of infection appear, treatment with antibiotics needs to be given. If blood glucose is not well controlled, referral to a higher-level facility is recommended.	C
Sickle cell disease	There is an increased risk of pulmonary, cardiac or neurologic complications and possible increased risk of wound infection.	A
Local infection	There is an increased risk of post-operative infection.	
	Scrotal skin infection	D
	Active STI	D
	Balanitis	D
	Epididymis or orchitis	D

Condition	Explanation of condition	Medical eligibility for vasectomy
Coagulation disorders	Bleeding disorders lead to an increased risk of post-operative haematoma formation, which, in turn, leads to an increased risk of infection.	S
Previous scrotal injury		C
Systemic infection or gastroenteritis	There is an increased risk of post-operative infection.	D
Large varicocele	The vas may be difficult or impossible to locate; a single procedure to repair varicocele and perform a vasectomy decreases the risk of complications.	C
Large hydrocele	The vas may be difficult or impossible to locate; a single procedure to repair hydrocele and perform a vasectomy decreases the risk of complications.	C
Filariasis elephantiasis	If elephantiasis involves the scrotum, it may be impossible to palpate the spermatic cord and testis.	D
Intra-scrotal mass	This may indicate underlying disease.	D
Cryptorchidism		S
Inguinal hernia	Vasectomy can be performed concurrent with hernia repair.	S

12.4 CLIENT ASSESSMENT

Preoperative Assessment

The recommended information to include in a preoperative medical evaluation of a male client is:

Demographic information

Includes client's name, address, age, marital status, if married spouse's name, occupation, education, number of living children, and age of the youngest child.

Medical history

The medical history should record any of the following:

- Respiratory problems (e.g., asthma)
- Heart disease
- Diabetes
- Bleeding disorders
- Convulsions
- Psychiatric conditions
- Scrotal or inguinal surgery

- Genitourinary infections
- Sexual impairment and scrotal abnormalities
- Allergies to medications
- Addictions
- History of recent trauma
- Current medications
- Physical examination

The physical examination should include the following:

- Blood pressure
- Pulse
- Examination of the local operative area
- Other examinations as indicated by the medical history

The physical examination is part of the medical screening, not part of the surgical procedure. The examination should be done before the client has received anaesthesia for surgery.

Laboratory examination

Routine laboratory tests are not necessary.

Conditions to be reviewed by physician

The following localized conditions can make the operation difficult or increase risks:

- Large varicocele
- Large hydrocele
- Inguinal hernia
- Filariasis (elephantiasis)
- Scar tissue
- Crypto orchidism
- Previous scrotal surgery
- Intra-scrotal mass

Certain systemic disorders require special precautions and possible hospitalisation for the procedure, including the following:

- Severe anaemia (Hb less than 7 g/dl, or Hct less than 20%)
- Bleeding disorders
- Diabetes, hypertension (should be controlled before surgery)
- Heart disease

In cases where there is increased risk, the physician and the client must weigh the risks of the procedure against its benefits.

CLINICAL PROCEDURE

12.4.1 Timing of Procedure

Male clients with no contraindications should be offered surgery.

12.4.2 Preoperative Medication and Anaesthesia

Premedication for NSV clients should be discouraged. However, if the client appears to need sedation, he may be given diazepam 5–10 mg orally 45–60 minutes before the operation. NSV should be performed using local anaesthesia with 1% Xylocain (without epinephrine).

12.4.3 No-Scalpel Techniques

The NSV technique uses two specially designed but simple instruments to puncture the scrotum to access the vas. The instruments are:

- NSV ringed forceps (3.5 to 4.0 mm diameter ring)
- NSV dissecting forceps

After isolating the vas through the skin with the ringed forceps, the dissecting forceps is used to puncture the scrotal skin (as opposed to an incision) to access and deliver the vas. The NSV technique does not require skin suture.

For detailed information refer to the No-Scalpel Vasectomy reference manual, NHTC.

Vas occlusion methods

In Nepal the preferred method is to divide the vas, remove a small segment and ligate at both ends with 2/0 silk sutures. (Ligation +excision+ fascial interposition).

Applying heat or electricity to the ends of each vas (cauterizing) has an even lower failure rate than ligation and excision. The chances that vasectomy will fail can be reduced further by enclosing a cut end of the vas, after the ends have been tied or cauterized, in the thin layer of tissue that surrounds the vas (fascial interposition).

Whenever possible, cautery (electro-thermal) should be used; thermal cautery with fascial interposition gives the best success rate. Places where regular cautery is not available or not practical (e.g. VSC outreach clinics), handheld battery-operated cautery equipment could be used.

Refer to the No-Scalpel Vasectomy reference manual, NHTC.

Monitoring client during procedure

The client may be monitored by observing his general condition and state of consciousness during and after surgery.

12.5 MANAGEMENT OF COMPLICATIONS

Anaesthesia complications

Use of general anaesthesia significantly and unnecessarily increases the risks of major complications associated with vasectomy and is not recommended except in certain complicated procedures. For local anaesthesia, when intravascular injections are avoided and the recommended doses of Xylocain are not exceeded, toxic reactions are rare. However, toxic reactions may manifest as convulsions requiring assisted ventilation and anticonvulsants (e.g., diazepam).

Surgical complaints

The most common complaints following NSV are swelling of scrotal tissue, bruising and pain. While these symptoms generally disappear without treatment, ice packs, scrotal support and simple analgesics provide relief. The incidence of these symptoms can be reduced by using gentle operating technique and checking for bleeding.

Complications, such as haematomas and infections, are uncommon. Haematomas can be minimized by ensuring meticulous haemostasis. Also, clients must be careful not to strain the scrotal sac for several days after surgery. Infections can be minimized with meticulous aseptic technique and good post-operative care. There is no evidence that routine prophylactic use of antibiotics is beneficial if asepsis is adequate.

Surgical emergencies

The surgical team should manage surgical emergencies in accordance with the techniques outlined in the *Management of Emergencies in Family Planning Services in Nepal reference manual*.

Table 12-3: Management of Complications of NSV

Complication	Assessment	Management
During Procedure		
Superficial Bleeding (skin edges or subcutaneously)	Apply secure pressure over wound. Then check if bleeding persists.	Post-operatively <ul style="list-style-type: none"> Place secure pressure dressing on wound. If bleeding persists, reopen wound under local anaesthesia, identify the bleeders and ligate them with sterile suture.
Vasovagal Reaction	Check vital signs.	<ul style="list-style-type: none"> Reassure client. Stop procedure. Elevate client's lower extremities. Provide additional local anaesthesia if needed. After patient becomes stable, continue procedure.
Haematoma	Confirm presence of blood collection.	Apply haemostatic suture. If bleeding stops, continue procedure.
After procedure		
Wound Infection	Confirm presence of infection or abscess.	If skin infection is present, treat with ampicillin and cloxacillin. If abscess is present, drain and treat as indicated.
Postoperative Fever	Determine source of infection.	Treat infection based on findings.
Haematoma	Confirm presence of blood collection.	Apply warm, moist packs to site. Observe; if extensive, may require drainage. If infected, treat as indicated.

Complication	Assessment	Management
Unusually severe pain at puncture site	Determine presence of infection or abscess.	Treatment based on findings (e.g., moist heat, analgesics).
Vaso-cutaneous Sinus (Discharging Scrotal Sinus)	Confirm the presence of discharging sinus and any concomitant infection.	If infection—treat before referring for release operation. Antibiotics should be given.
Sperm Granuloma	Confirm presence of nodule. Determine if infection is present.	Asymptomatic: no treatment. Pain: analgesic if persistent pain. Evacuate cyst, cut and seal ¼” vas towards the testis.
Chronic Pain	History of reaction of unilateral or bilateral scrotal pain.	Non-steroidal analgesic.
Pregnancy of the Partner	Determine if pregnant and age of gestation. Determine period elapsed since the procedure. Assess for azospermia by semen analysis.	Explain couple how the failure could have occurred. Refer for appropriate care. If more than 3 months since NSV and semen analysis is positive for sperm, discuss repeat vasectomy for man, if necessary, or possibly tubal ligation for partner.
Vasectomy Failure	Repeat to confirm positive semen analysis.	Explain how failure happened. Refer to repeat procedure.

12.6 PREOPERATIVE, POST-OPERATIVE AND DISCHARGE CARE AND CLIENT INFORMATION

Preoperative client information

At community level:

Community health staff to inform the clients to prepare for surgery by:

- Receiving counselling about family planning procedures and specifics about NSV
- Bathing, wearing clean clothes
- Refraining from alcohol use on the day of procedure

At NSV procedure site:

Health staff and counsellor should explain in detail the following before the client undergoes the procedure:

- the steps of the operation, including information on local anaesthesia and screening
- what to expect in operating theatre
- expectations about pain/discomfort

Post-operative client information

Required client discharge instructions are outlined in Appendix F III.

The following points must be explained to all clients:

- **Post-NSV Contraception:** Some form of contraception, either male or female, is required for 3 months. Semen examination should be performed and azospermia established before use of temporary methods of contraception is stopped. Healthcare worker should provide the client with condoms for 3 months, and explain how to use them.
- **General Discharge information:** Resumption of activities, wound care and warning signs (signs of infection, bleeding, pain), medications and dosages, referral site for complications, timing of follow-up visit, printed post-operative information should be given on discharge.

Post-operative danger signs

- Fever (greater than 38°C or 100.4°F)
- Dizziness with fainting
- Persistent or increasing scrotal pain and/or swelling
- Bleeding or fluid coming from the puncture site

Post-operative care

Clients may be discharged after 30 minutes if stable without abnormal findings. If sedation has been used, client must be ambulatory, alert and oriented with normal vital signs. Before the client is discharged, a trained staff member should repeat and verify client understanding of discharge instructions.

MOBILE NSV SERVICES

12.7 INTRODUCTION

Mobile services available

High quality voluntary surgical contraception services should be available and accessible to all people, regardless of where they live. Because mobile services are usually delivered far from comprehensive emergency facilities, quality standards in these settings should be maintained as they are in permanent facilities.

Types

- A trained surgical team from outside the district travels to district healthcare facilities that do not offer voluntary surgical contraception to their clients. The team brings with it any equipment and supplies that are unavailable at the local sites.
- A trained surgical team travels from the district centre to areas that do not have voluntary surgical contraceptive services and performs surgery in local health facility or temporary medical settings, such as schools and community centres. While the team brings with it almost all necessary equipment and supplies similar to routine service centre it also uses tables, lamps and other items available at the local sites.

12.8 PREREQUISITES

12.8.1 Personnel

Mobile teams must be staffed by trained, skilled and experienced personnel. Because a mobile team often does not have ready access to the backup emergency facilities available in most urban areas, the team's personnel must be skilled at recognizing problems promptly and managing them immediately.

Sometimes mobile teams go into the field sporadically, perhaps only a few weeks or months out of a year. If this is the case, members of the surgical team may need practice or retraining between their trips, especially if they do not routinely perform voluntary surgical contraception year-round. Surgical skills diminish if they are not used.

Cases should not exceed 50 procedures per day per surgeon.

12.8.2 Equipment and Supplies

Mobile teams must go into the field with all the supplies and equipment needed to perform surgery and manage surgical emergencies. In addition, they should have formal relationships with established medical facilities in the areas where they work. In this way, clients who need continued medical treatment after emergencies will have a way to receive it. The local backup facilities must have the supplies, equipment and trained staff required to handle complications following NSV for emergency drugs and equipment (See Appendix D II). For more information, refer to the Management of Emergencies in Family Planning Services in Nepal reference manual.

12.8.3 Facility

The physical facility should be similar to standard static NSV service site.

- The facility should have sufficient space with enough rooms to accommodate NSV services (Adequate area for pre-procedure counselling, waiting area, instrument processing, operation theatre and post-operative area).
- Proper set-up to maintain infection prevention practices includes an excellent instrument/equipment sterilization system, client flow system that maintains privacy, hygiene and asepsis, and proper lighting and privacy.

12.9 STANDARD OF SERVICES

All NSV standards outlined in this chapter apply to both mobile and static service sites.

RECANALIZATION OF VAS (VASECTOMY REVERSAL)

12.10 INTRODUCTION

An estimated 42-60 million individuals have had the vasectomy which is considered as a common method of contraception worldwide²⁹ More than 500,000 vasectomies are performed per year and surveys suggest that 6–10% of vasectomized men ultimately sought consultation for reversal. Vasectomy is a minor surgery in which surgeon cuts and occludes vas deference blocking sperm

29 Pile JM, Barone MA. Demographics of vasectomy – USA and international. Urol Clin North Am. 2009;36:295–305.

produced in testes from reaching the semen that is ejaculated from the penis. **Vasectomy reversal** is the surgery that reconnects the pathway reversing the effects of vasectomy. It is also called recanalization of vas. Vasectomy reversal may be expensive but it is important to have a surgeon who is experienced, confident and prepared for either operation.

12.10.1 Situation in Nepal

Though the vasectomy is considered permanent, there are conditions where reversal is needed. Following conditions are the main reasons for vasectomy reversal surgery in Nepal.³⁰

- Second marriage (51.7 %)
- Death of the child (27.6%)
- Couple wanting another child (15.3%)

12.10.2 Recent Trend

In recent years, increasing number of couples of lower age and lower parity have begun to request for sterilization. When these couples experience the death of a child or if they divorce or remarry following death of wife/husband, they may wish to be able to have another child. The availability of microsurgical recanalization procedures would bring hope to those in need of these services and would improve the confidence of clients who are acceptors of voluntary sterilization.

12.11 COUNSELLING

Vasectomies may be reversible up to 20 years or longer after the initial procedure. But the longer you wait to reverse a vasectomy, the less likely that it becomes successful. Generally, after vasectomy reversal surgery, sperms usually start appearing in semen again in few months but some may have to wait for a year or longer. Chances of getting partner pregnant after vasectomy reversal surgery range from 30 to 90% depending on the type of procedure.

For men, age does not significantly affect the results of vasectomy but it is important to consider age of the spouse as fertility rapidly decreases and stops once they near age of menopause.

If vasectomy reversal surgery is not successful, repeat surgery could be considered. Besides this, it is advisable to counsel on alternative approaches for getting partners pregnant.

12.12 PROCEDURE AND POST-OPERATIVE CARE

Vasectomy reversal surgery could be done in outpatient basis but some may prefer short stay in hospital. This is a microsurgery usually done using microscope (magnification from 5-40 times). After anesthesia, surgeon will make a small cut on each side of the scrotum. S/he will trim the scarred end of the vas where they were occluded by the vasectomy. Then he will take 'vasal fluid' from the vasal end closer to testes. The fluid is checked to see if it has sperm in it. If there is sperm in vasal fluid, vasovasostomy is done. If there is no sperm in the vasal fluid, there is need to do vasoepididymostomy.

12.13 VASOVASOSTOMY

It literally means reconnecting severed vas deferens. The two ends of vas deferens that were cut apart during vasectomy are stitched back together.

³⁰ Maharjan O, Pandey A (2014) Causes of Male Re-Canalisation (Vasovasostomy (Reversal Surgery)) in Vasectomy Client in Nepal. *J Family Med Community Health* 1(3): 1012.

12.14 VASOEPIDIDYMOSTOMY

In this surgery, the vas deferens is stitched to the epididymis. If there is pressure built up inside the vas (caused by the original vasectomy) it results in microscopic ‘blowouts’ and ‘concretions’ in the more delicate ductwork closer to the testicle which hampers or scars tissue blocking sperm from moving into vas deferens or if a vasovasostomy won’t reverse the vasectomy, vasoepididymostomy surgery is needed.

After surgery, cold compress may be needed to prevent swelling along with tight underwear. Intensive physical activities should be avoided for few days. Incision area should be kept dry for few days. It is advisable to wait for few weeks for resuming sexual activity. NSAID pain killer may help relieve the pain.

12.15 POST-OPERATIVE COMPLICATIONS

Consult surgeon if following symptoms (complications) seen.

- Pain or redness around the incision
- Pus or bleeding from the incision
- Fever over 100 F (38 C)
- Hematoma
- Loss of feeling around your scrotum

12.16 RECOMMENDATION

- Procedures are technically challenging but yield excellent technical and acceptable reproductive outcomes in Nepal so the government should make them easily accessible and affordable to Nepali citizens.
- Remarriage is the main factor individuals may wish to be able to have another child so pioneers’ programme and research should be continued to innovate and strive to achieve better outcomes for our patients.
- The demand for reversal could be considerably reduced by more careful screening of the potential vasectomy acceptors so it is time to consider a country policy on birth, marriage and migration.
- These types of issues must be propagated through appropriate methods and media to the largest audiences.

SECTION III: SITUATION- SPECIFIC CONTRACEPTION

CHAPTER 13

POST-PARTUM CONTRACEPTION AND LACTATIONAL AMENORRHOEA METHOD (LAM)

POST-PARTUM CONTRACEPTION

13.1 INTRODUCTION

The post-partum period is a unique phase in life of a woman and her newborn. It is a time of transition, adjustment and adaptation along with significant biological, social and psychological changes.

According to the World Health Organization (WHO) the post-partum period starts from the first hour after delivery of the placenta up to first six weeks after delivery, when the body of the woman has largely returned to its non-pregnant state.

There is a range of important information and services that should be provided during both the antenatal and post-partum period. New research recommends that providers strengthen their efforts to educate and counsel post-partum women on Healthy Timing and Spacing of Pregnancy (HTSP)^{31 32} and how the use of family planning to space pregnancies can significantly contribute to improved health for both women and their babies.

Box 13-1

HTSP focuses on helping programmes and services achieve three key outcomes:

- Healthy pregnancy spacing of at least 24 months after a live birth.
- Healthy pregnancy spacing of at least six months after a spontaneous or induced abortion.
- Healthy timing of the first pregnancy no earlier than age 20 in adolescents.

Post-partum family planning is the initiation and use of family planning methods during the first year after delivery.

Ideally post-partum family planning counselling should start during antenatal care.

All post-partum women should be counselled regarding family planning and provided with the method of their choice prior to discharge from the birthing facility. While all methods of

31 Postpartum Family Planning-Healthy Pregnancy Outcomes, A Training Manual, ESD/USAID, 2009

32 Reproductive Health Clinical Protocol for Medical Officers, FWD, 2076

contraception are appropriate for post-partum women, the time for starting each method depends on a woman's breastfeeding status.

- The client should be given instructions on how to use the method, or when to return to initiate the method.
- When appropriate, the client should be given the selected method prior to leaving the facility, rather than referring the client to an outpatient department or other clinic to obtain services.
- Providers who perform outreach services to women who have had home births should carry with them a supply of family planning methods in order to provide these methods to women who choose them.
- Facilities offering post-partum tubal ligation or post-placental/immediate post-partum IUCD insertion require special training and equipment for these services.

13.2 COUNSELING POST-PARTUM WOMEN

Contraceptive counselling and service provision should be part of:

- Immediate post-partum care (delivery to 1 week) for hospital-based birthing services
- Early post-partum (within 48 hours of delivery)
- Routine post-partum services (1 week up to 6 weeks) offered to women in the first 6 weeks following childbirth
- Extended post-partum (6 weeks to one year after delivery)
- Initial and follow-up visits to post-partum women during outreach services

For post-placental (within 10 minutes after placenta delivery), counselling should be done during antenatal period and reconfirmed during labour and delivery (including just before insertion).

Intra-caesarean (during caesarean immediately after removal of placenta)

It is best if counselling for post-partum contraception begins in the antenatal period.

Refer to the National Medical Standard Volume III for additional information on the care of post-partum women.

The following guidelines for counselling post-partum women have been adapted from the International Planned Parenthood Federation (IPPF):

- Encourage full breastfeeding.
- Do not recommend that clients discontinue breastfeeding to begin use of a contraceptive method.
- Counsel clients to choose a contraceptive method that does not adversely affect breastfeeding or the health of the infant.

Refer to Chapter 1: Counselling and Informed Choice for the general principles of counselling, informed choice and client-provider interaction.

13.3 RETURN OF FERTILITY

Return of Fertility: A Distinction between Post-abortion and Post-partum Women

For post-partum women, non-breastfeeding women can ovulate and become pregnant as soon as four to six weeks after delivery. Fertility is less predictable in breastfeeding women. If they are not exclusively breastfeeding, and start supplemental feeding of their babies, they are at risk of

pregnancy, even if their menstruation has not yet returned. To avoid pregnancy, they should see a healthcare provider who can help them choose an FP method that is appropriate for them.

(Source: Postpartum Family Planning for Healthy Pregnancy Outcomes: A Training Manual The Extending Service Delivery (ESD) Project/USAID. February 2009)

TECHNICAL CONSULTATION RECOMMENDATIONS TO WHO⁷

Preamble

Individuals and couples should consider health risks and benefits along with other circumstances such as their age, fecundity, fertility aspirations, access to health services, child-rearing support, social and economic circumstances, and personal preferences in making choices for the timing of the next pregnancy.

Recommendation for spacing after a live birth

After a live birth, the recommended interval before attempting the next pregnancy is at least 24 months, in order to reduce the risk of adverse maternal, perinatal and infant outcomes.

Recommendation for spacing after a miscarriage or induced abortion

After a miscarriage or induced abortion, the recommended minimum interval to next pregnancy is at least six months in order to reduce risks of adverse maternal and perinatal outcomes.

Source: World Health Organization, 2006 Report of a WHO Technical Consultation on Birth Spacing.

13.4 CONTRACEPTION FOR BREASTFEEDING WOMEN

Breastfeeding women need contraceptive methods before or at the time of fertility return during lactation, depending on personal and social circumstances. Contraceptives provided for breastfeeding mothers must not affect lactation, her health and must be effective as well as safe.

Breastfeeding women do not need additional contraception for at least 6 weeks post-partum, and for up to 6 months if they are using the LAM. Table 13-1 shows the recommended time of starting contraception for breastfeeding women. Breastfeeding women deciding to use contraception other than LAM should be counselled about the potential effects of some contraceptives on breastfeeding. COCs are considered to be the method of last choice for breastfeeding women before 6 months post-partum because they can decrease breast milk production.

Table 13-1: Earliest Time That a Woman Can Start a Family Planning Method After Childbirth

Family Planning Method	Fully or Nearly Fully Breastfeeding	Partially Breastfeeding or Not Breastfeeding
Lactational amenorrhoea method	Immediately	(Not applicable)
Vasectomy	Immediately or during partner's pregnancy [‡]	
Male or female condoms	Immediately	
Copper-bearing IUCD	Within 48 hours, otherwise wait 4 weeks	

Female sterilization	Within 7 days, otherwise wait 6 weeks	
Fertility awareness methods	Start when normal secretions have returned (for symptoms-based methods) or she has had 3 regular menstrual cycles (for calendar-based methods). This will be later for breastfeeding women than for women who are not breastfeeding.	
Progestin-only injectables	6 weeks after childbirth§	Immediately if not breastfeeding§ 6 weeks after childbirth if partially breastfeeding§
Progestin-only pills Implants	Immediately	
Combined oral contraceptives	6 months after childbirth§	After 21 days if not breastfeeding§ After 6 weeks if partially breastfeeding§

‡ If a man has a vasectomy during the first 6 months of his partner's pregnancy, it will be effective by the time she delivers her baby.

§ Earlier use is not usually recommended unless other, more appropriate methods are not available or not acceptable.

THE LACTATIONAL AMENORRHOEA METHOD (LAM)

13.5 INTRODUCTION

Lactational amenorrhoea method (LAM) is a family planning method based on natural effect of breastfeeding on fertility. Breastfeeding has been internationally recognized as an effective, temporary contraceptive. It can be effective for up to 6 months. The use of LAM enables both mother and infant to take full advantage of the numerous other benefits of breastfeeding, including longer birth intervals and the healthiest source of nutrition for infant. Women using LAM for contraception should be seen again 5 months post-partum to help them choose another method if desired. LAM provides an opportunity to offer women an ongoing method that she can continue to use after 6 months.

13.5.1 Effectiveness

LAM provides more than 98% effectiveness for women who satisfy these three major conditions:

- are fully or nearly fully breastfeeding³³
- have not had return of menstruation⁴³
- are less than 6 months post-partum

'Fully breastfeeding' includes both exclusive breastfeeding (the infant receives no other liquid or food, not even water, in addition to breast milk) and almost-exclusive breastfeeding (the infant receives vitamins, water, juice, or other nutrients once in a while in addition to breast milk).

"Nearly fully breastfeeding" means that the infant receives some liquid or food in addition to breast milk, but the majority of feedings (more than three-fourths of all feeds) are breast milk.

33 Baby fed on demand, more than 6 times per day/night without supplementation (baby's diet is 90% breast milk).

34 Spotting that occurs during the first 56 days is not considered as menstruation.

13.5.2 Return of Fertility

When the baby sucks on the mother's nipples it causes a surge in prolactin in the mother's blood, which inhibits ovulation. Ovulation remains disrupted or suppressed, as long as the frequency, duration and intensity of suckling are high. Ovulation in a lactating woman often naturally resumes around 6 months post-partum.

As commonly used, about 2 pregnancies per 100 women using LAM in the first 6 months after childbirth. This means 98 of every 100 women will not be pregnant.

When used correctly, less than 1 pregnancy per 100 women using LAM in the first 6 month after childbirth.

Once LAM is stopped, fertility returns.

13.6 SERVICE DELIVERY

13.6.1 Counselling

The LAM can be easily understood by the mother if time is taken to explain it in a language she understands, and her concerns and questions are addressed. The desired outcome is a woman who:

- clearly understands the three major conditions which make LAM effective
- knows what optimal breastfeeding practices are and when to stop using LAM and adopt another contraceptive method
- knows what contraceptive method she wants to use that is compatible with breastfeeding
- knows **that condoms should be used if there is a risk of STI/HIV**

Counselling should include the following:

- Begin immediately to obtain the benefit of colostrum
- Feed on demand, at least every 2 hours in a day, every 6 hours at night (Fully breastfeeding: 10-12 times in 24 hours and duration of two breastfeeding should not be more than 4 hours.)
- Fully breastfeed for 6 months (baby's diet is more than 90% breast milk)
- Encourage nutritional diet for mother
- Continue to breastfeed as long as possible (2 years or more)
- Initiate an alternative contraception method before 6 months post-partum in women **desiring continued contraception**

When to stop using LAM as the sole contraceptive method:

- Baby reaches 6 months
- Menstruation returns
- Baby receiving supplemental feedings

Discuss complementary family planning methods for lactating mother:

- Refer to Table 13-2 in this chapter for description of other methods for lactating women.
- Offer client a backup method before she no longer meets the LAM criteria, so she can be fully protected before she is at risk of pregnancy.
- Counsel the client that lubricated condoms can help with vaginal dryness associated **with breastfeeding. The client will then be protected until she can visit the family planning clinic for help in choosing a different method if desired.**

THE LACTATIONAL AMENORRHEA METHOD FOR WOMEN WITH HIV

- Women who are living with HIV can use LAM. Breastfeeding will not make their condition worse. There is a chance, however, that mothers with HIV, if not taking antiretroviral therapy (ART), will transmit HIV to their infants through breastfeeding.
- Women taking antiretroviral therapy (ART) can use LAM. Giving ART to an HIV-infected mother or an HIV-exposed infant very significantly reduces the risk of HIV transmission through breastfeeding. Among women not taking ART, 14% of their babies will be infected after 2 year of breastfeeding. Among women taking ART, less than 1% of their babies will be infected.
- Exclusive breastfeeding reduces the risk of death from common childhood illness and improves the health and development of the child and also the health of the mother.
- Refer to PMTCT Guideline – Women with HIV should receive ART and should exclusively breastfeed their infants for the first 6 months of life. Introduce appropriate complementary foods at 6 months, and continue breastfeeding for the first 12 months. Breastfeeding may stop only once a nutritionally adequate and safe diet without breast milk can be provided.
- Urge women with HIV to use condoms along with LAM. Used consistently and correctly, condoms help prevent transmission of HIV and other STIs.
- At 6 months—or earlier if her monthly bleeding has returned or she stops exclusive breastfeeding—a woman should begin to use another contraceptive method in place of LAM.
- Dual Protection

13.6.2 Eligibility**Indications**

For mothers who wish to use LAM as a contraceptive, a central consideration must be that breastfeeding needs to be done “fully or nearly fully.”

If a mother cannot fully or nearly fully breastfeed, then another method of contraception must be used. A physical examination or laboratory investigation is not necessary.

Three screening questions:

1. Has your monthly bleeding returned?
2. Are you regularly giving the baby other foods besides breast milk or allowing long periods without breastfeeding, either day or night?
3. Is your baby more than 6 months old?

If the answer to all of these questions is ‘no’ – she can use LAM.

But, when the answer to any one of these questions is ‘yes’ – her chances of pregnancy increase. Advise her to begin using another family planning method and to continue breastfeeding for the child’s health.

13.6.3 Contraindications

Conditions when LAM would not be effective so should not be used

Table 13-2: Contraindications for the use of LAM

Condition	Precaution	Rationale
Has resumed her menstruation.	Counsel about need for another method.	Menstruation indicates resumption of ovulation and the likelihood of pregnancy occurring if another contraceptive method not used. Of the three LAM criteria, the return of menstruation is the most important indication of fertility return.
Baby suckles infrequently (less than six to ten times a day on both breasts) or her baby sleeps through the night.	Counsel about need for another method.	Decreased breastfeeding frequently allows the pituitary ovarian axis to recover from lactational suppression and ovulation resumes.
Has added regular supplemental foods or liquids to her baby’s diet. NOTE: “Supplemental” does not include tiny amounts of ritual or medicinal liquids or food; “supplemental” refers to liquid or food, which substitutes for a breastfeed.	Counsel about need for another method.	Decreased breastfeeding frequently allows the pituitary ovarian axis to recover from lactational suppression and ovulation resumes.
Baby is 6 months old or older.	Counsel about need for another method.	After 6 months, the likelihood that breastfeeding alone will effectively prevent pregnancy is reduced. This is true because breastfeeding frequently is decreased due to regular supplementation of the baby’s diet. (See above.)

13.6.4 Risk of Exposure to STIs, Including HIV/HBV

Clients should use condoms in addition to breastfeeding if there is any chance that she or her partner is at risk of STIs, including HIV/HBV. A client should be encouraged to seek treatment should she ever feel that she or her partner is infected with an STI. Refer to Chapter Fourteen: Contraception and STI.

Update from PMTCT guidelines - If mother is HIV-positive, there is a chance that HIV will be passed to the infant during birth or during the year following. Although HIV can be transmitted to the infant through breast milk, it is important that in resource-poor settings the risks and benefits of breastfeeding be taken into consideration. The UNAIDS recommendation on breastfeeding by HIV sero-positive women in resource-poor setting is that women be encouraged to make an informed decision about infant feeding (i.e., consideration of the risks and benefits be individualized for each woman).

13.7 CONTRACEPTION FOR NON-BREASTFEEDING WOMEN

Although most non-breastfeeding women will resume menstrual cycles within 4 to 6 weeks after delivery, only about one-third of first cycles will be ovulatory and even fewer will result in pregnancy. In order to avoid all risk of pregnancy, however, contraception should be started at the appropriate time.

- Barriers and withdrawal with the resumption of sexual intercourse following delivery
- Hormonals, IUCDs or VSC—BEFORE the resumption of sexual intercourse following delivery.

Due to pregnancy-induced risks of possible blood clotting problems (elevated coagulation factors) present until 3 weeks post-partum, COCs should not be started before that time. On the other hand, POCs can be started immediately post-partum because they do not increase the risk of blood clotting problems. Table 13-3 shows the recommended time of starting contraception for non-breastfeeding women.

Table 13-3: Contraceptive Method Information for the Post-partum Period

Method	Timing	Characteristics	Remarks
Lactational Amenorrhoea Method (LAM)	Should begin breastfeeding immediately (within one hour) after delivery. Highly effective for up to 6 months if exclusive breastfeeding and amenorrhoeic.	Considerable health benefits for both mother and infant. Gives time to choose and prepare for other contraceptive methods.	For greatest effectiveness, must be fully breastfeeding.
COCs (Also see chapter on Combined Oral Contraceptives)	If fully or nearly fully breastfeeding; More than 6 months after giving birth - If her monthly bleeding has not returned, she can start COCs any time if it's reasonably certain that she is not pregnant. She will need a backup method for the first 7 days if not certain. If not breastfeeding, COCs can be started after 3 weeks post-partum. If less than 4 weeks, can start COC at any time on days 21-28 after giving birth, No need for backup method. If risk of VTE, wait until 6 weeks. If more than 4 weeks, if menstruation has not returned, can start COC anytime if it is reasonably certain she is not pregnant, otherwise need a backup method for the first 7 days.	During the first 6–8 weeks post-partum, COCs decrease the amount of breast milk. (This effect may continue for up to 6 months). During the 3 weeks post-partum, the estrogen in COCs slightly increases the risk of blood clotting problems. If client has resumed menstruation and sexual activity, start COCs only if reasonably sure she is not pregnant.	COCs should be the last choice for breastfeeding women less than 6 months post-partum. COCs may be given for women who were pre-eclamptic or had hypertension during pregnancy as long as BP is in normal range when starting COCs. There is no increased risk of blood clotting beyond the 3rd week post-partum.

Method	Timing	Characteristics	Remarks
<p>Progestin-only Pills (POP) POCs (Implants, PIDs and POPs)</p> <p>(Also see chapter on Subdermal Implants and Depo-Provera)</p>	<p>Fully or nearly full breastfeeding; Less than 6 months post-partum and menstruation has not returned, can start POP any time between giving birth and 6 months.</p> <p>If more than 6 months, and menstruation has not returned, can start POP any time if it is reasonably certain that she is not pregnant. She will need backup methods for first 2 days.</p> <p>If not breastfeeding and less than 4 weeks post-partum, can start immediately. No need of backup. If more than 4 weeks, and menstruation has not returned, can start POP any time if it is reasonably certain she is not pregnant. She will need backup method of 2 days.</p>	<p>During the first 6 weeks post-partum, progestin.</p> <p>No effect on quantity of breast milk.</p>	<p>Irregular bleeding may occur with POC use, even in lactating women.</p>
<p>DMPA (Progestin-only Injectables)</p>	<p>Fully and nearly fully breastfeeding -If less than 6 months post-partum - delay first inject until 6 weeks. If menstruation has not returned, can start DMPA any time between 6 weeks to 6 months.</p> <p>If more than 6 months post-partum - If menstruation has not returned, she can start any time if it is reasonably certain she is not pregnant. Needs a backup method for the first 7 days.</p>	<p>As above</p>	<p>As above</p>

Method	Timing	Characteristics	Remarks
Implants (Progestin-only)	<p>Less than 6 months after giving birth</p> <ul style="list-style-type: none"> • If her monthly bleeding has not returned, she can have Implants inserted any time between giving birth and 6 months. No need for a backup method. • If her monthly bleeding has returned, she can have Implants inserted as advised for women having menstrual cycles. <p>More than 6 months after giving birth</p> <ul style="list-style-type: none"> • If her monthly bleeding has not returned, she can have Implants inserted any time if it is reasonably certain she is not pregnant. She will need a backup method for the first 7 days after the injection. • If her monthly bleeding has returned, she can have Implants inserted as advised for women having menstrual cycle. 	As above	As above

Method	Timing	Characteristics	Remarks
<p>IUCDs (Copper T 380A)</p> <p>(Also see chapter on IUCDs)</p>	<p>May be inserted immediately post-placental pregnancy, during caesarean section after removal of placenta or post-partum within 48 hours of delivery.</p> <p>If IUCD is not inserted within 48 hours and her monthly bleeding has not returned, she can have IUCD inserted any time between 4 weeks and 6 months after giving birth. No need of backup method.</p> <p>If more than 6 months after giving birth and her monthly bleeding has not returned, she can have IUCD inserted any time if it is reasonably certain she is not pregnant. No need for a backup method.</p>	<p>No effect on quantity of breast milk.</p> <p>Fewer post insertion side effects (bleeding, pain) when IUCD inserted in breastfeeding women.</p>	<p>Requires trained provider for insertion.</p> <p>Client should be counselled and screened during prenatal period for post-placental pregnancy insertion.</p> <p>First year IUCD removal rates are lower among breastfeeding women.</p> <p>Spontaneous expulsion rate higher (6–10%) than for interval insertion (lowest rates if inserted high in fundus within 10 minutes after placenta delivered).</p>
<p>Condoms</p> <p>(Also see chapter on Barrier Methods and Withdrawal)</p>	<p>May be used any time post-partum.</p> <p>If there is risk of STIs, should use condoms.</p>	<p>No effect on quantity of breast milk.</p> <p>Useful as interim method if initiation of another chosen method must be postponed.</p>	

Method	Timing	Characteristics	Remarks
Natural Family Planning	Not recommended until resumption of 3 regular menstruations. Client may begin charting at 3 weeks post-partum but should continue to use LAM.	No effect on quantity of breast milk or health of infant. Requires a high degree of couple motivation.	Cervical mucus difficult to “read” until menstruations have resumed and are regular (ovulatory). Basal body temperature fluctuates at night during breastfeeding. Thus, measuring “early morning” basal body temperature elevation after ovulation may not be reliable.
Withdrawal (Coitus Interruptus) or Abstinence (Also see chapter on Barrier Methods and Withdrawal)	May be used any time post-partum.	No effect on quantity of breast milk. Abstinence only is 100% effective. Withdrawal is less effective.	Withdrawal or long periods of post-partum abstinence not always practiced. Acceptable in cultures in which post-partum abstinence is traditional. Backup method needed if couple decides to resume intercourse.
Minilap/ Tubal Ligation (Also see Chapter Minilap)	May be performed immediately post-partum or within 48 hours, or else should be delayed until 6 weeks post-partum.	No effect on quantity of breast milk. Post-partum minilaparotomy is easiest to perform within first 48 hours of delivery.	Counselling and informed consent should take place prior to labour and delivery (during prenatal period).

Method	Timing	Characteristics	Remarks
Vasectomy (See also Chapter NSV)	Can be performed any time.	Not immediately effective.	Vasectomy performed at this time leads to less disruption of intercourse for the couple. Partner's contact with healthcare system may be a good time for man to use services.

Table 13-4: Post-partum Contraception for Non-Breastfeeding Women

Method	Timing
IUCD	<ul style="list-style-type: none"> • Immediately post-partum by trained provider • Intra-operative following C-section • 4 weeks after child birth
Condom	<ul style="list-style-type: none"> • As soon as sexual intercourse has resumed
Progestin Injectable (DMPA)	<ul style="list-style-type: none"> • Immediately after delivery • Any time in the first 6 weeks after childbirth • Any time after 6 weeks post-partum and it is reasonably certain that the client is not pregnant
Subdermal Implants	<ul style="list-style-type: none"> • Immediately after delivery • Any time in the first 6 weeks after childbirth • Any time after 6 weeks post-partum and it is reasonably certain that the client is not pregnant
Female Sterilization	<ul style="list-style-type: none"> • Immediately post-partum within 48 hours after childbirth • 6 weeks after childbirth
Male Sterilization	<ul style="list-style-type: none"> • Any time after childbirth
Combined Oral Contraceptive Pills	<ul style="list-style-type: none"> • Start 3 weeks after childbirth

Table 13-5: Post-partum Contraception for Breastfeeding Women

Method	Timing
LAM	<ul style="list-style-type: none"> • Begin breastfeeding immediately after delivery • Highly effective for up to 6 months if fully breastfeeding and amenorrheic
Condoms	<ul style="list-style-type: none"> • When sexual activity is resumed
IUCD	<ul style="list-style-type: none"> • Immediately post-partum by trained provider • Intra-operative following C-section • 4 weeks after childbirth
Female Sterilization	<ul style="list-style-type: none"> • Immediately post-partum within 48 hours after childbirth • 6 weeks after delivery
Male Sterilization	<ul style="list-style-type: none"> • Any time after childbirth
Progestin Injections (DMPA)	<ul style="list-style-type: none"> • 6 weeks after childbirth
Implants	<ul style="list-style-type: none"> • 6 weeks after childbirth
Combined Oral Contraceptive Pills	<ul style="list-style-type: none"> • 6 months after childbirth

POST-ABORTION CONTRACEPTION

14.1 INTRODUCTION

Women who have received safe abortion service or been treated for abortion complications need easy and immediate access to contraceptive services. Providing contraceptive service after abortion as per the reproductive health need of the women will help in preventing future unintended pregnancies. All women receiving abortion-related care, regardless of her age, marital status, or number of children, should be offered contraceptive counselling and services. Different healthcare providers can offer these women with contraceptive counselling and service including those who provide abortion service.

14.2 POST-ABORTION CONTRACEPTION: COUNSEL WITH COMPASSION

Provision of comprehensive abortion care is one of the few occasions when a woman comes in contact with the healthcare system. Therefore, it represents an important opportunity for providing contraceptive counselling information and services. Post-abortion contraception counselling can occur at any time, before or after the procedure or treatment.

Immediate initiation of contraception following abortion has shown to improve adherence and reduce the risk of unintended pregnancy. Therefore, while providing comprehensive post-abortion contraception services, service provider should respect the service seekers' preferences as well as medical eligibility for various methods. This will increase the likelihood that she will continue its correct and consistent use as it helps the woman avoid unintended pregnancies in the future. Good counseling gives support to the woman who has just been through abortion or treated for abortion complication. In particular:

- Try to understand what she has been through
- Treat her with respect and avoid judgement and criticism
- Ensure privacy and confidentiality
- Ask if she wants someone, she trusts to be present during counselling

WHO recommends all women should receive contraceptive information and be offered counselling, including emergency contraception, before leaving the healthcare facility. The post-abortion contraception is also a basic human right, fundamental to reproductive and sexual health.

Post-abortion contraceptive counselling should include the following components:

- Counselling about contraceptive needs in terms of the women's reproductive goals
- Choices among various contraceptive methods
- Provision of contraceptive service

- Access to follow-up care
- Information about the need for protection against STIs including HIV and the importance of condom use for all women regardless of the contraceptive method chosen.

Within the context of abortion care, contraceptive counseling and provision allows a woman to begin her chosen method immediately following the abortion. When providing post-abortion contraception to a woman, her medical eligibility for each method must be considered provided that:

- The woman receives adequate counselling and gives informed consent where applicable as per national protocol.
- The woman is screened for any precautions for using a contraceptive method.
- There are no severe complications requiring further treatment.

Health facilities providing safe abortion service should be able to provide most methods of contraceptives in the facility if the woman chooses a particular method. The service provider must also ascertain that the woman is not limited by physical or emotional factors (e.g. sedation, severe pain) that would compromise the woman's ability to make a clear decision. In this case, the woman and/or partner should be provided backup methods (e.g. condoms, Emergency Contraception) with instructions for use, referral and follow-up information. If the contraceptive chosen by the woman cannot be provided (e.g. sterilization is rarely offered at primary care level), the woman should be given information about where and how she can get it and offered an interim method.

14.3 IMPORTANT INFORMATION ON POST-ABORTION CONTRACEPTIVE SERVICES

Post-abortion contraceptive counselling requires special considerations so it is important to counsel with compassion. The abortion that occurred may be induced or spontaneous and in any of the above conditions, the needs and interests of the woman for contraceptive must be respected. Generally, almost all methods of contraception can be initiated immediately following a surgical or medical abortion. Immediate start of contraception after surgical abortion refers to the same day as the procedure, and for medical abortion refers to the day the first pill of a medical abortion regimen is taken. As with the initiation of any method of contraception, the woman's medical eligibility for a method should be verified.

WHO³⁵ recommends that women undergoing abortion should receive clear, simple, oral and written instructions about how to care for themselves after leaving the health-care facility, and how to recognize complications that require medical attention. These instructions should include: abstaining from sexual intercourse and from placing anything in the vagina until bleeding stops; the availability of contraception, including emergency contraception, to avoid a pregnancy (fertility may return as soon as 2 weeks following abortion); and the need to return to the health-care facility in case of increasing pelvic pain, heavy bleeding or fever

All women should be given accurate information to assist them in choosing the most appropriate contraceptive method to meet their needs by using counselling tools for contraception, e.g. Balanced Counselling Strategy (BCS), Decision Making Tools (DMT). The final selection of a method, however, must be the woman's alone.

A woman has important choices to make after receiving abortion service. Woman's acceptance of a contraceptive method must not be a prerequisite for abortion care services or treatment of

35 Safe abortion: technical and policy guidance for health systems, WHO, Second Edition, 2012

complications. Providers should also be aware of cultural attitudes and beliefs that may influence a woman's use of contraception, particularly young women. To make decision about her health and fertility, she needs to know:

- **Fertility Returns Quickly-** They should be informed that on average, a woman will ovulate within 20 days of MA with mifepristone and misoprostol but can ovulate as early as 8 days which is not significantly different after MVA. This puts her at risk of pregnancy unless an effective contraceptive method is used.
- Women can choose among many different contraceptive methods that she can start at once as almost all contraceptive methods can be provided same day as the procedure. Methods that women should not use immediately after giving birth pose no special risks after treatment for abortion complications.
- Women can wait before choosing a contraceptive for ongoing use, but she should consider using backup method in the meantime if she has sex. Even if women decide not to use contraceptive method at this time, information on available methods and where to obtain them should be provided. Also, provider can offer condoms, pills or ECP to take home and use later.
- If the women desire to delay or prevent future pregnancy, contraceptive counselling and information on the benefits of spacing children for at least 6 months may still be useful for future reference, or if a delay in pregnancy is medically recommended.
- If the woman is seeking an abortion following what she considers to be a contraceptive failure, the provider should discuss whether the method may have been used incorrectly and how to correct its use or whether it may be appropriate for her to change to a different method. The counselling must include effectiveness of methods.
- Women should be encouraged to understand the meaning of and avoiding unintended pregnancy.
- Inform that there are safe, effective temporary and permanent contraceptive methods to prevent pregnancy including characteristics, uses, side effects, and effectiveness of the methods available.
- Inform where and how to obtain regular supply of the next dose of the contraceptive methods.

Correct, consistent use of condoms protects against HIV and other sexually transmitted infections.

14.4 WHEN TO START POST-ABORTION CONTRACEPTION

Immediate initiation of contraception following abortion is critical to reduce the risk of unintended pregnancy. It is important to remind the woman that fertility returns soon after abortion (even before she can resume her normal period) whereas ovulation after abortion takes place within 20 days but in some cases as early as 8 days.

Preferably the woman should be offered contraceptive counseling and given the method of her choice to initiate immediately in the facility. If referral services are needed, a woman should be provided with an interim method of contraception such as condoms or birth control pills until she can access her chosen method. All modern methods of contraception can be started immediately after treatment for abortion as long as no signs of ongoing complications are present (e.g. infection). Complications are usually temporary conditions and if a complication does not allow a woman to start her desired method, then a temporary or "bridging" method can be started in the interim until it is safe to start her desired method. For example, if the woman has an infection after surgical abortion and desires a post-abortion IUCD then she could use oral contraceptives until she recovers and can receive her IUCD.

Table 14-1: Guidelines for Selection of Contraception by Methods

Method	Timing After Abortion	Characteristics	Remarks
Voluntary female sterilization (Minilap)	<ul style="list-style-type: none"> Technically, minilap procedures usually can be performed immediately after an abortion. If infection or severe blood loss is present, do not perform until fully resolved. e.g. only when infection is fully resolved (3 months) or injury is healed. 	<ul style="list-style-type: none"> Permanent method with high effectiveness Immediately effective No change in sexual function No long-term side effects Minilap after a first trimester abortion is similar to an interval procedure; after a second trimester abortion it is similar to a post-partum procedure. 	<ul style="list-style-type: none"> Adequate counseling and fully informed consent are required before the procedure Slight possibility of surgical complications Requires trained staff and appropriate equipment No protection against STIs/HIV
Voluntary male sterilization (Non-Scalpel Vasectomy)	Technically, NSV procedures can be performed at any time and timing is not related to abortion	<ul style="list-style-type: none"> Permanent method with high effectiveness No change in sexual function No long-term side effects Not immediately effective; therefore, an interim (backup) contraceptive method must be used. 	<ul style="list-style-type: none"> Adequate counseling and fully informed consent are required before the procedures Slight possibility of surgical complications Requires trained staff and appropriate equipment No protection against STIs/HIV
Progestin-only Implants	May be inserted immediately after abortion, preferably on the day of treatment.	<ul style="list-style-type: none"> Most effective method of Long Acting Reversible Contraceptive (LARC) Can be started immediately even if infection or injury in genital track is present. Immediately effective Immediate return to fertility on removal 	<ul style="list-style-type: none"> May cause irregular bleeding, especially spotting, or amenorrhea Trained provider required to insert and remove No protection against STIs/HIV

Method	Timing After Abortion	Characteristics	Remarks
IUCD (CUT-380 A)	IUCD can be inserted immediately after surgical abortion (If there is no complication), preferably on the day of treatment IUCD can be inserted in medical abortion only when there is completion of abortion	<ul style="list-style-type: none"> • Most effective method of Long Acting Reversible Contraceptive (LARC) • It is effective for 12 years. • Immediate return of fertility following removal • Does not interfere with intercourse • If infection is present, treat or refer, and help the client choose another method. If she still wants • the IUD, it can be inserted after the infection has completely cleared. • It can be inserted once any injury to the genital track has healed. 	<ul style="list-style-type: none"> • May increase menstrual bleeding and cramping during the first few months • Complications include uterine perforation during insertion, which is rare • May increase risk of pelvic inflammatory disease (PID) • Trained provider required to insert and remove
Injectables-Progestin only (E.g. Depoprovera)	Can be given immediately after both surgical and medical abortion, preferably on the day of treatment	<ul style="list-style-type: none"> • Can be started immediately, even if infection is present • Can be provided by non-physicians • Not user-dependent, except for remembering to get the injection every three months 	<ul style="list-style-type: none"> • May cause heavy and/or irregular bleeding initially, especially for the first few months • Resupply must be available • Delayed return to fertility • No protection against STIs/HIV

Method	Timing After Abortion	Characteristics	Remarks
Oral Combined Contraceptives (E.g. Nilocon white/Sunaulo Gulaf) and progestin-only (mini pill)	Can be given immediately after both surgical and medical abortion, preferably on the day of treatment	<ul style="list-style-type: none"> • Can be started immediately, even if infection is present • Can be provided by non-physicians 	<ul style="list-style-type: none"> • Requires continued motivation and daily use • Resupply must be available • No protection against STIs/HIV • Effectiveness may be lowered with long-term use of certain medications, including rifampin, dilantin and griseofulvin
Barriers (Condoms)	Can be used immediately after both surgical and medical abortion	<ul style="list-style-type: none"> • No method-related health risks • Inexpensive • Good interim method if initiation of another method must be postponed • No medical supervision required • Provide protection against RTIs and STIs (HBV and HIV/AIDS) • Easily discontinued • Effective immediately • Can be provided by non-physicians 	<ul style="list-style-type: none"> • In typical use, much less effective than IUCD or hormonal methods • Requires use with each act of intercourse • Resupply must be available

Method	Timing After Abortion	Characteristics	Remarks
Fertility awareness methods - Natural Family Planning Method	Not recommended for immediate use as post-abortion contraception	<ul style="list-style-type: none"> The first ovulation after an abortion will be difficult to predict and the method is unreliable until a regular menstrual pattern has returned Women who have had regular menstrual periods prior to the abortion, signs of ovulation can typically be discerned after at least one post-abortion menstrual period has taken place 	<ul style="list-style-type: none"> Alternative methods recommended until resumption of normal cycle Requires extensive instruction and counseling Requires continued motivation and a thorough understanding by the woman and her partner of how to use the method Does not protect against STIs/HIV
Emergency Contraceptive Pills	May be used immediately after abortion	<ul style="list-style-type: none"> Important backup method when contraception fails (for example, condom breaks), when no method is used or when sex is forced 	<ul style="list-style-type: none"> Providing emergency contraceptive pills in advance as a backup method may help prevent future unintended pregnancies No protection against STIs/HIV Generally, less effective than other contraceptive methods

CHAPTER 15

CONTRACEPTION AND STI INCLUDING HIV

15.1 INTRODUCTION

It is prudent to provide STI screening on family planning clients. Sexually Transmitted Infections and family planning services overlap substantially. STI/HIV are frequently encountered in family planning clients, especially among certain high-risk groups (e.g., clients who have more than one sexual partner). Furthermore, some contraceptive methods have a range of characteristics—from protecting against STI/HIV transmission to reducing the risk of complications from STI/HIV infection. Family planning providers can help their clients in various ways to prevent STI, including infection with the human immunodeficiency virus (HIV). The main linkages between contraception and STI/HIV services are:

- Prevention of STI/HIV transmission
- Opportunity for client screening for STI/HIV
- Counselling on FP as well as STI/HIV prevention
- Treatment of STI and its consequences from the same FP outlets

FACTS ON STI/HIV

- HIV is the virus that may ultimately cause acquired immune deficiency syndrome (AIDS). It gradually lowers the body's immune system, reducing its ability to fight other diseases.
- HIV infected people can live for many years without any signs or symptoms of infection. If not treated, the body's immune system breaks down and the person is unable to fight certain infections, known as opportunistic infections.
- There is no cure for HIV infection, but antiretroviral (ARV) therapy can slow down the progress of HIV infection, improve the health hence prolong life and reduce the risk of its transmission to others. ARV also reduces mother-to-child transmission at the time of delivery and during breastfeeding. Opportunistic infections should be diagnosed and treated appropriately.
- People at high risk of exposure to HIV can take PrEP—pre-exposure prophylaxis—to prevent HIV infection. PrEP consists of some of the same ARV drugs also used to treat infection. Hormonal contraceptives and PrEP can be taken at the same time. The effectiveness of the contraception and of PrEP is not affected by one another. Condom use while taking PrEP will help largely to prevent both HIV and other STI.
- STI/HIV facilitates transmission and disease progression to each other.
- Family planning service providers can help the client with prevention, care and treatment of STI/HIV.
 - » Counselling about ways to reduce risk of STI/HIV infection (dual protection)
 - » Counselling a couple that wants to have a child, where one partner is infected with HIV and needs to prevent HIV transmission to the other uninfected partner
 - » Refer clients for HIV counselling and testing and for HIV care and treatment at the nearest service centre, if the clinic does not have such service facilities

SAFER CONCEPTION FOR HIV SERODISCORDANT COUPLES

When a couple wants to have a child and one partner has HIV while the other does not (a serodiscordant couple), counselling on care and treatment is done on the following basis:

- The partner with HIV should take antiretroviral (ARV) therapy consistently and correctly until HIV is suppressed to the point that it cannot be detected.
- If the partner with HIV is not virally suppressed on ARV therapy, the partner who does not have HIV (HIV-negative) can consider taking pre-exposure prophylaxis (PrEP) during the period when they are trying to conceive (see Fertility Awareness Methods).
- If the woman has HIV but the man does not, a safe option for conception is artificial insemination (If such settings are available) with the uninfected partner's semen.

Both partners should be properly screened and adequately treated for any other STI before trying for conception.

CONTRACEPTION AND STI/HIV

Family planning providers can talk to clients about how they can protect themselves both from STI, including HIV, and pregnancy (dual protection).

Choosing a Dual Protection Strategy

Every family planning client needs to think about preventing STI including HIV—even people who assume they face no risk. The provider can discuss what situations place a person at increased risk of STI including HIV and clients can think about whether these risky situations come up in their own lives. If so, they can consider 5 dual protection strategies.

One person/couple might use different strategies in different situations/times. The best strategy is the one that a person is able to practice effectively in the situation that she or he is facing. (Dual protection does not necessarily mean just using condoms along with another family planning method.)

Strategy 1: Use a male or female condom correctly with every act of sex.

- One method helps protect against pregnancy and STI including HIV.

Strategy 2: Use condoms consistently and correctly plus another family planning method.

- Adds extra protection from pregnancy in case a condom is not used correctly.
- May be a good choice for women who want to be sure to avoid pregnancy but cannot always pressure their partners to use condoms.

Strategy 3: If both partners know they are not infected, use any family planning method to prevent pregnancy and stay in a mutually faithful relationship.

- Many family planning clients are in this group and thus are protected from STI including HIV.
- Depends on communication and trust between partners. (Other strategies, which do not involve using contraceptives, include:)

Strategy 4: Engage only in safer sexual intimacy that avoids intercourse or otherwise prevents semen and vaginal fluids from coming in contact with each other’s genitals.

- This strategy will not prevent syphilis, genital herpes, or infection with human papillomavirus. These infections may spread even through skin-to-skin contact.
- Depends on communication, trust, and self-control.
- If this is a person’s first-choice strategy, it is best to have condoms at hand in case the couple desire to have sex.

Strategy 5: Delay or avoid sexual activity (either avoiding sex all the time or abstaining for a longer time). This strategy is always available in case a condom is not at hand.

- If this is a person’s first-choice strategy, it is best to have condoms at hand in case the couple desire to have sex.

People at high risk of HIV infection can take PrEP—pre-exposure prophylaxis. This daily treatment with oral antiretroviral drugs greatly reduces the chances of infection if exposed to HIV. PrEP can be a part of any dual protection strategy.

People with STI and people with HIV, whether or not they are taking antiretroviral (ARV) therapy, can start and continue to use most contraceptive methods safely. There are a few limitations.

Table 15-1: Special Family Planning Considerations for Clients with STI, HIV, or on Antiretroviral Therapy

Method	Has STI	Has HIV
Intrauterine contraceptive device	Do not insert an IUCD in a woman who is at very high individual risk for gonorrhea and chlamydia, or who currently has gonorrhea, chlamydia, cervicitis or PID. (A current IUCD user who becomes infected with gonorrhea or chlamydia or develops PID can safely continue using an IUCD after treatment.)	A woman with HIV clinical disease that is mild or with no symptoms, including woman on ARV therapy, can have an IUCD inserted. Generally, a woman should not have an IUCD inserted if she has HIV clinical disease that is severe or advanced (WHO Stages 3 or 4). A woman using IUCD who becomes infected with HIV or whose HIV clinical disease becomes severe or advances (WHO Stages 3 or 4). A woman using IUCD can keep IUCD in place when she starts ARV therapy.
Female sterilization	If client has gonorrhea, chlamydia, purulent cervicitis, or PID, delay sterilization until the condition is treated and cured.	Women who are infected with HIV, including woman on ARV therapy, can safely undergo female sterilization (minilap). Delay the procedure if she is currently having an HIV-related illness.

Vasectomy	If client has scrotal skin infection, active STI, swollen, tender tip of penis, spermatic chords, or testicles, delay sterilization until the condition is cured.	Men who are living with HIV including on antiretroviral therapy can safely undergo vasectomy. Delay the procedure if he is currently having and HIV-related illness.
Combined oral contraceptives, monthly injectables	Can safely use combined hormonal method.	Can safely use combined hormonal method.
Progestin-only pills, injectables and implants	Can safely use progestin-only methods.	Can safely use progestin-only methods. (There is some concern that using a progestin-only injectable could make a woman more likely to develop HIV infection if exposed to the virus. However, a woman who already has HIV can safely use a progestin-only injectable.

15.2 SERVICE DELIVERY

15.2.1 Client Screening

The risk of STI including HIV in all clients should be assessed. Effective screening depends on the presence of signs or symptoms of STI and positive risk assessment. Costly laboratory/microscopy tests are done only if available and affordable. In order to assess STI risk and effectively screen clients, the service provider should:

- Know about high-risk sexual practices
- Be aware of the signs and symptoms of STI
- Be aware of prevalence of common STI in that particular community
- Diagnose clients based on their medical history or physical examination findings

The risk of acquiring an STI, including HIV, depends on a person's behaviour, the behaviour of that person's sexual partner or partners, and how common those diseases are in the community. By knowing what STIs are common locally, a healthcare provider can better help a client assess her or his own risk. Understanding their own risk for HIV and other STIs helps people decide how to protect themselves and others. People are often the best judges of their own STI risk, especially when they are told what behaviours and situations can increase risk.

SEXUAL BEHAVIOUR THAT CAN INCREASE EXPOSURE TO STI INCLUDES (POSITIVE RISK ASSESSMENT):

- Sex with a partner who has STI symptoms
- A sex partner who has recently been diagnosed with or treated for an STI
- Sex with more than one partner (the more partners, the more risk)
- Sex with a partner who has multiple sex partners and does not use condoms consistently

Where many people in the community are infected with STIs, casual sex without a condom may be risky with any new partner.

In certain situations, people tend to change sexual partners often, to have many partners, or to have a partner who has other partners. All of these behaviours increase the risk of STI transmission. This includes people who:

- Have sex in exchange for money, food, gifts, shelter, or favours
- Move to another area for work, or travel often for work, such as truck drivers
- Have no established long-term sexual relationship, as is common among sexually active adolescents and young adults

15.2.3 STI Screening History Should Include

Early Identification

Early identification of STI is not always possible. For example, chlamydia and gonorrhoea often have no noticeable signs or symptoms in most of the women. However, early identification, if possible, is important both to avoid passing on the infection to the sexual partners and to avoid serious long-term health consequences, such as infertility, stillbirth, cervical cancer, congenital syphilis and neonatal conjunctivitis. To help detect STI early, a provider can:

- Ask the client's sexual history and assess the risk of having an STI
- Ask whether the client or the client's partner has genital sores or unusual discharge
- Look for signs of STI when doing a pelvic or genital examination for another reason
- Know how to counsel a client who may have an STI
- Promptly diagnose and treat, or else refer for appropriate care of the client who has signs or symptoms of any STI
- Advise clients to notice genital sores, warts, or unusual discharge in themselves or in their sexual partners
- For clients without STI signs or symptoms but who are at high risk of STI, encourage syphilis/HIV screening and, when feasible, screening for gonorrhoea and chlamydial infection

Risk assessment for STI is based on following questions.

- Do you have a vaginal/penile sores or discharge?
- In the past year, have you had a genital tract problem such as a vaginal/penile discharge, ulcers or skin lesions in your genital area?
- Has your sex partner been treated for a genital tract problem, such as discharge from the vagina/penis or swollen glands on groins, in the last 3 months?
- Do you know if your sex partner has other sex partners?
- Are you or your partner in a profession that puts you at high risk (e.g., commercial sex worker, MSM, driver, military, migrants)?
- Have you had more than one sex partner in the last 3 months?
- Do you think that you might have an STI?

Table 15-2: Common signs and symptoms that may suggest an STI include:

Symptoms	Possible cause
Discharge from male urethra—pus, clear or yellow-green drip	Commonly: Chlamydia, gonorrhoea Sometimes: Trichomoniasis
Abnormal vaginal discharge or pain during sex	Chlamydia, gonorrhoea, pelvic inflammatory disease

Burning or pain during urination	Chlamydia, gonorrhoea, herpes
Lower abdominal pain or pain during sex	Chlamydia, gonorrhoea, pelvic inflammatory disease
Swollen and/or painful testicles	Chlamydia, gonorrhoea
Itching or tingling in the genital area	Commonly: Candidiasis, Trichomoniasis Sometimes: Herpes
Blisters or sores/ulcers on the genitals, anus, surrounding areas, or mouth	Herpes, syphilis, chancroid
Fleshy growth on the genitals, anus, or surrounding areas	Human papillomavirus
Unusual cervical discharge— changes from normal vaginal discharge in colour, consistency, amount, and/or odour	Most commonly: Bacterial vaginosis, candidiasis (see Common Vaginal Infections That May Not Be Sexually Transmitted, next page) Commonly: Trichomoniasis Sometimes: Chlamydia, gonorrhoea

15.2.5 Consequences of STI

- Increased risk of HBV and HIV transmission
- Ectopic pregnancy (7–10 times increased risk in women with history of PID)
- Increased risk of cervical cancer Human Papilloma Virus (HPV)
- Chronic abdominal pain (18% of females with a history of PID)
- Infertility:
 - 20–40% of males with untreated chlamydia and gonorrhoea
 - 55–85% of females with untreated PID (8–20% of females with untreated gonorrhoea develop PID)
- Psychological impact
- Huge economic burden

In addition, infants can be infected at birth with eye infections causing blindness and pneumonia, suffer central nervous system damage or die as a result of STI.

15.3 CLINICAL PROCEDURE

In primary healthcare facilities, diagnosis usually rests solely on clinical findings (signs/symptoms) or risk assessment (Syndromic approach of STI Management). In secondary healthcare facilities, where pelvic examinations can be done and a microscope and simple laboratory testing are available, greater accuracy in managing the most common STI is often possible (Enhanced Syndromic Management of STI). For further information on the clinical findings, diagnosis and treatment of STI, refer to GoN National STI Case Management Guidelines.

If a client or partner has any clinical findings of STI, both the client and partner should be treated. Many methods of contraception are appropriate in this setting, should the client be currently using or has an interest in using family planning services.

15.4 FP COUNSELLING ON STI PATIENTS

Clients identified with high-risk sexual behaviours should receive counselling on the risks and benefits of particular contraceptive method. Two types of contraceptives may be required: a highly effective form of contraceptive to prevent pregnancy, and condoms to prevent STI. Therefore, it is important to offer condoms to all clients, regardless of which contraceptive method they choose.

Table 15-3: Counselling Outline and Clinical Recommendations

Method	Remarks Regarding STI
COCs (Also see chapter on Combined Oral Contraceptives Pills)	<ul style="list-style-type: none"> No protection against STI including HBV, HIV. If high risk behaviour or previous STI detected in screening history, concurrent use of condoms is recommended.
POCs (Implants and Depo) (Also see chapters on Depo-Provera and Implants)	<ul style="list-style-type: none"> No protection against STI including HBV, HIV. If high-risk behaviour or previous STI detected in screening history, concurrent use of condoms is recommended.
IUCDs (Also see chapter on IUCDs)	<ul style="list-style-type: none"> No protection against STI including HBV, HIV. Should not be used by women at risk for or with clinical findings of STI. If such a client insists on using an IUCD, concurrent use of condoms is required. Should not be used by women with current, recent (less than 3 months) or having recurrent PID. If there is clinical findings of vaginal infection (candidiasis or bacterial vaginosis), treat and recheck before IUCD is inserted.
Condoms (male and female) (Also see chapter on Non-Clinical Methods)	<ul style="list-style-type: none"> Protect against STI including HBV, HIV. To be fully effective, condoms must be worn at all times during genital contact, and with every act of intercourse.
Minilap and NSV (Also see chapter on Minilap and NSV)	<ul style="list-style-type: none"> No protection against STI including HBV, HIV. If high-risk behaviour or previous STI detected in screening history, concurrent use of condoms is recommended.

CHAPTER 16

CONTRACEPTION FOR WOMEN NEAR PERIMENOPAUSE

16.1 INTRODUCTION

Once a woman reaches menopause, she stops ovulating and ceases menstruating. Menopause is defined as cessation of menstruation for at least 12 consecutive months, without another reason for amenorrhoea (such as pregnancy and delivery, hormone therapy, other medical or surgical conditions). After menopause she does not need a contraceptive method.

Menopause usually occurs between the ages of 45 to 55 years. It is important to prevent pregnancy until it is clear that she is no longer fertile. She can use any method if she has no medical condition that limits its use.

Women over the age of 35 years are in need of safe and effective contraception because pregnancy can carry increased health hazards (morbidity and mortality) for mothers and their babies. Fertility declines in women over 35 years, resulting in less attention paid by these women to contraceptive protection. Pregnancies, however, are possible and therefore contraception should be provided.

There are specific problems related to pregnancy in this age group:

- Maternal mortality among women in their forties is about five times greater than that of women in their twenties.
- Perinatal mortality doubles as maternal age doubles.
- Chromosomal abnormalities, particularly Down's syndrome, increases.
- Spontaneous abortion rates increase.³⁶

The possibilities of these problems make the importance of reliable contraception for this age group very clear.

In summary, women near menopause can continue to use contraceptive methods, including low-dose COCs. By itself, age does not restrict women from using any contraceptive method.

Any woman who has reached menopause and has no bleeding for 12 months in a row is considered not ovulating and does not need any contraceptive method.

In the following table factors relevant to the use of specific contraceptives by women near menopause are discussed.

³⁶ Age and Fertility A Guide for Patients Revised, American Society for Reproductive Medicine, 2012

Table 16-1: Considerations for Women Near Menopause

Method	Remarks
COCs	<ul style="list-style-type: none"> • Women aged 35 and older who smoke - regardless of how much - should not use COC. • Women aged 35 years and older who are heavy smokers (>15 cigarettes per day) should not use monthly injectables. These women should be encouraged to stop smoking. • Women aged 35 or older should not use COC if they have migraine headaches (whether with migraine aura or not). • Low-dose COCs are contraceptive of choice for perimenopausal women; if there is no other contraindication, because it will regulate the menstruation cycle and prevents pregnancy.
POCs (Implants, POICs and POPS)	<ul style="list-style-type: none"> • A good choice for woman who cannot use methods with estrogen. • POICs can be used safely by women over 35 years of age and in the perimenopausal years (40-50s) even if they are heavy smokers. • DMPA, if used for prolonged period of time, might decrease bone mineral density slightly. This may increase the risk of developing osteoporosis and possibly having bone fractures later, after menopause. WHO has concluded that this decrease in bone mineral does not place age or time limits on use of DMPA. • Implants are highly recommended for women over 35 who want long-term contraception, especially if client has had trouble using another method or does not want voluntary sterilization.
IUCDs	<ul style="list-style-type: none"> • IUCDs could be a better choice as it is non-hormonal. Expulsion rates fall as women grow older, and are lowest in women over 40 years of age. Insertion may be more difficult due to tightening of the cervical canal.
Condoms (male and female)	<ul style="list-style-type: none"> • Only method that protects against other STIs (e.g., HBV, HIV). • Affordable and convenient for women who may not have sex often.
Minilap and vasectomy	<ul style="list-style-type: none"> • Appropriate for clients/couples who are certain about desire for permanent contraception • Perimenopausal woman is more likely to have conditions that require delay, referral or caution for female sterilization.
Emergency contraceptive pills	<ul style="list-style-type: none"> • Can be used by women of any age, including those who cannot use hormonal methods on a continuous basis.
Fertility awareness methods	<ul style="list-style-type: none"> • Lack of regular cycles during perimenopausal period makes difficult to use these methods reliably.

WHEN WOMEN CAN STOP USING CONTRACEPTIVE

As a woman nears menopause, monthly bleeding becomes irregular before it completely stops (menopause). Therefore, it is recommended to continue using a family planning method until 12 months with no bleeding have passed.

Hormonal methods affect bleeding and so it may be difficult to know if a woman using them has reached menopause. She can switch to a non-hormonal method. She no longer needs contraceptions once she has had no bleeding 12 months in a row.

Copper-bearing IUCDs can be left in place until after menopause. The IUCD should be removed 12 months after a woman's last monthly bleeding.

Relieving Symptoms of Menopause

Women experience physical effects before, during, and after menopause: hot flashes, excess sweating, difficulty to hold urine, or increase in nocturnal frequency of urine, vaginal dryness that can make sex painful, and difficulty sleeping.

Providers can suggest ways to reduce some of these symptoms:

- Deep breathing from the diaphragm may make a hot flash go away faster.
- Meditation and yoga could be helpful, as it helps in relaxation and joint mobility.
- Eat foods like soybeans, Tofu, soya nuggets and green vegetables.
- Eat foods rich in calcium (such as dairy products, beans, carom seeds and fish).
- Engage in moderate physical activity (walking and some weight bearing exercises) to help slow the loss of bone density that comes with menopause.
- Vaginal lubricants or moisturizers can be used if vaginal dryness persists and causes irritation. During sex, use a commercially available vaginal lubricant, water, or saliva as a lubricant if vaginal dryness is a problem.
- Refer to a gynaecologist if vaginal dryness is persistent; she might need local hormonal cream.

CONTRACEPTION FOR ADOLESCENTS

17.1 INTRODUCTION

In Nepal, the Ministry of Health and Population has developed the National Adolescent Health and Development Strategy (2000) which is now updated (National Adolescent Health Development Strategy (2018) to address adolescent reproductive health and development issues and provide standard information and services.

Nepal uses the World Health Organization definition of adolescence as the **period between 10-19** years of age. Adolescence is a period of transition from childhood to adulthood and this is not only period of growth, exploration and opportunities, but also a time of risk taking, experimentation, and vulnerability. While adolescence generally is a healthy period of life, adolescents are often not well-informed about how to protect their sexual and reproductive health, thus are at potential risk of unwanted pregnancies, unsafe abortion, STIs, and HIV. They are less informed, less experienced, less comfortable, and have fewer resources to access reproductive health services including family planning than adults. Adolescents need special attention, guidance and support to address their specific concerns, problems and needs and to assist them in developing responsible behaviour and a healthy lifestyle.

17.2 ELEMENTS OF CARE

Adolescent reproductive healthcare services should be friendly, affordable, accessible, confidential and non-judgmental in order to appeal to adolescents and improve utilization of healthcare services.

National Adolescent Health and Development Strategy, 2018 has defined the following:

- Strategic Principles and Directions
- Adolescent participation and leadership
- Equity and inclusion
- Right-based approach with a sense of accountability
- Strategic partnership
- Expansion of programmes related to adolescents
- Role of federal, provincial and local government

This strategy has identified following **key intervention areas**:

- Safe and supporting environment
- Sexual and reproductive health

- Nutrition and healthy diet
- Prevention of HIV and Sexually Transmitted Diseases
- Safety from accidents, injury, natural disasters and violence
- Substance abuse preventions
- Promotion and development of psychosocial, emotional and mental health
- Promotion of health for prevention and control of non-communicable diseases

The following are important components of Adolescent Reproductive Healthcare:

- Information, counseling and education about sexual and reproductive health
- Prevention and management (counseling, education, referral or provision of services) of STIs (including HIV/HBV)
- Counseling and education, with referral or provision of services for pregnancy prevention, family planning, pregnancy management
- Linkages and referrals to other reproductive healthcare and other facilities

This chapter deals with Contraception/Family Planning services. For other components of adolescent health service **Please refer to National Medical Standard Vol II, Chapter Five, Adolescent Health Services.**

17.3 PREREQUISITES

17.3.1 Adolescent Friendly Services

The services should have characteristics of Adolescent Friendly Services in terms of programme, provider and health facility.

Programmatic Characteristics

Following are key programme characteristics:

- Adolescents' involvement in programme design (adolescent input should be solicited about what services should be offered and how including perceptions of welcome, privacy and confidentiality)
- Promotion of services where adolescents usually gather including provision of services in the community
- Both married and unmarried boys and girls are welcomed and served
- Parental involvement encouraged but not required
- Affordable fees
- Adequate supply of commodities
- Short waiting times
- Educational material available on-site
- Linkages with schools, youth clubs, and other institutions
- Alternative ways to access information, counseling, and services

Provider Characteristics

Adolescent services involve counseling and a variety of services, some of which may not be offered on site. All facilities should have staff to provide basic counseling, basic examination and assessment, and know where to refer for services not available on site.

- Counseling: Many appropriate staff (eg. ANM, Staff Nurse, AHW, HA, MBBS or higher) trained on adolescent issues and provide non-judgmental counseling
- Demonstrate respect for young people
- Maintain privacy and confidentiality
- Be non-judgemental
- Allow adequate time for client and provider interaction
- For contraceptive services: The type of care needed will determine which cadre (as above) is appropriate.

Facilities: Health Facility Characteristics

The minimum facility for providing Adolescent Reproductive Health Services should include:

- A place to register the client and adequate waiting area
- Privacy:
 - A private/curtained area for consultation and counseling
 - A private/curtained procedure area equipped for clinical procedures
- Convenient hours
- Convenient location
- Adequate space
- Comfortable surroundings
- Adequate IEC/BCC materials (related ASRH)

17.3.2 Equipment and Supplies of Adolescent Friendly Services

There is no unique equipment or supplies needed to provide adolescent friendly services, however availability of adolescent specific educational materials is required.

17.3.3 Record Keeping and Reporting

Maintain record keeping and reporting as specified in the respective contraceptive methods (for detail see respective chapters).

17.4 SERVICE DELIVERY

17.4.1 Counselling and Informed Choice

Counselling should be flexible and responsive to individual needs. Counselling adolescent clients may require a different approach than the regular FP counselling. The client's partner or other immediate family member should be included in a counselling session only with the consent of the client. For general FP counselling, refer to Chapter One: Counselling and Informed Choice.

Counselor may need special training in dealing with the particular needs and concerns of adolescents and should:

- create a safe environment in which adolescents can express their needs
- build rapport with adolescents through use of language they are familiar with
- ensure confidentiality, including agreeing not to discuss decisions with parents (guardians), as appropriate
- be open and non-judgemental in response to their questions and expressions about their sexuality

(For detail please refer to NMS Vol II)

Counselling for adolescents should include discussion of the:

- Benefits of certain contraceptive methods (condoms) in protecting against STIs (including HBV and HIV) as well as preventing pregnancy.
- Safety of contraceptive method and not affecting long-term fertility.
- Appropriate sex education that enables adolescents to develop the knowledge and confidence to make decisions related to their sexual behaviour, including the decision not to engage in sexual intercourse until they are ready to do so.
- Sexuality and reproductive health with emphasis on adolescent issues: self-esteem, appearance, negotiating unwanted sexual advances, pressure from peers or partners.
- Address questions for adolescents on their unique condition (irregular menstruation, change in body structure, gender identification, personal hygiene, menstrual health).

17.4.2 Clinical Assessment

For successful management of the problems of adolescents, service providers should obtain detailed information. For most of the adolescent clients, the clinical history taking and examination, particularly reproductive health-related, is a new experience thus are hesitant to allow examination. Therefore, following things should be considered while examining an adolescent:

- Presence of an attendant
- Be gentle
- Informed consent (explain why and what you are going to do)
- Watch very carefully the comfort level of the client
- Avoid unnecessary examination or clinical procedure which may discourage them from using the method.

17.4.3 Counseling on Pregnancy Prevention/Family Planning

During counseling it is important to discuss about safer sex, including abstinence, non-penetrative sex and all relevant FP methods including condoms and emergency contraception (EC). Most of the available contraceptive methods are safe and effective for adolescents to use (see below Table 17-1).

In our society, marriage of adolescents is still widespread though legal age at marriage for both boys and girls is 20 years. These married adolescents face many of the same issues as unmarried adolescents. In addition, they are usually under pressure from their families and society to bear children soon after marriage. It is important to emphasize pregnancy prevention and following discussion points would be useful:

- High risk of contracting STIs (including HBV and HIV/AIDS) through unprotected sexual intercourse
- Unwanted pregnancy resulting in unsafe abortion
- Early childbearing (less than 19 years of age) resulting in high risk of complications for both mother and child due to the mother's physical immaturity with respect to labour and birth
- Especially for females, early childbearing leading to reduced opportunities for further education and employment that in turn affect their social and cultural development
- Emergency contraception methods are effective and safe for use in adolescence
- IUCDs are less desirable except for parous adolescents with low risk of STIs

17.5 EMERGENCY CONTRACEPTION FOR ADOLESCENTS

Emergency contraception has an important place in family planning services for adolescents because young people may have difficulties in obtaining contraceptive supplies and are often likely to have unplanned and unprotected sexual intercourse. Emergency contraception can be used as a backup in case of condom breakage or improper use of the withdrawal method. As its name implies, it should be emphasised that it should only be used in emergency situation, not on regular basis.

For more detailed information, refer to Chapter 18: **Emergency Contraception**.

17.6 CONTRACEPTIVE METHODS

Under this section, only factors relevant to their use by adolescents are provided. Detailed information for each method is given in the relevant chapters on that method. Various methods of contraception are suitable for adolescents. Adolescent women are often less tolerant to side effects than older women. With counseling, however, they will know what to expect and may be less likely to stop using their methods. Effective contraception for adolescents, whether they are married or unmarried, is especially important because of more serious consequences of unwanted pregnancies. An important consideration is better protection against possible pregnancy. It should be remembered that adolescents may be able to prevent pregnancy as well as STIs/HIV, so should be advised on 'dual protection' (see Chapter 15 - Contraception and STIs including HIV).

Table-17-1: Counselling Outline and Clinical Recommendations for Contraceptive Methods

Method	Remarks Regarding Adolescents
COCs (Also see chapter on Combined Oral Contraceptive Pills)	<ul style="list-style-type: none"> • May be safely used once an adolescent has started menstruating. • Requires strong client motivation. They may find it difficult to take pills every day. Forgetfulness and irregular use increase method failure. • Conditions requiring precautions are rare in adolescents. • No protection against STIs (e.g., HBV, HIV), therefore adolescents may need to use condoms as well. • WHO MEC - Category 1
Progestin-only Pills (POPs)	<ul style="list-style-type: none"> • May be safely used once an adolescent has started menstruating. • No protection against STIs (e.g., HBV, HIV/AIDS), therefore adolescents may need to use condoms as well. • WHO MEC - Category 1
Implants (Also see chapter on Implants)	<ul style="list-style-type: none"> • Recommended for adolescents who want intermediate or long-term effective contraception, especially if they had trouble with compliance while using another method. • Should be well counselled about the possibilities of weight gain, irregular bleeding/spotting which can be bothersome to adolescents. • No protection against STIs (e.g., HBV, HIV/AIDS), therefore adolescents may need to use 'dual protection'. • Implants are visible beneath the skin. • No need to worry about supplies frequently (condom, pills) makes this method attractive to adolescents. • WHO MEC - Category 1

<p>DMPA (Also see chapter on DMPA)</p>	<ul style="list-style-type: none"> • Highly recommended for adolescents who require intermediate-duration effective contraception, especially if they had trouble with compliance while using another method. • Should be well-counselled about the possibilities of weight gain, irregular bleeding/spotting which can be bothersome to adolescents. • No need to worry about supplies frequently (condom, pills) and non-visibility make this method attractive to adolescents. • Some studies suggest that use of Depo-Provera in adolescents (below 18) within 2 years of menarche may pose a risk of osteoporosis i.e. losing bone mineral density (BMD) but recover BMD after discontinuation. • No protection against STIs (e.g., HBV, HIV), therefore adolescents may need to use condoms as well. • WHO MEC - Category 2 (menarche to 18 yr) and Category 1 (18 and above)
<p>IUCDs (Cu-T) (Also see chapter on IUCDs)</p>	<ul style="list-style-type: none"> • Can be an adequate option for parous adolescents who require long-term protection against pregnancy. • IUCDs are more likely to come out among women who have not given birth because their uterus is small. • WHO MEC - Category 2 (menarche to 20 yr) and Category 1 (20 or above)
<p>Condoms (both male and female) (Also see chapter on Condoms)</p>	<ul style="list-style-type: none"> • Protects against STIs (e.g., HBV, HIV). • Very effective only if used properly. • Counselling on the availability of emergency contraception should be given in case of condom breakage. • Should be made widely available for adolescents. • Provides immediate protection. • Not clinic dependent. • Requires planning and couple motivation with each act of intercourse. Not always at hand during unplanned intercourse. • WHO MEC- Category 1
<p>Withdrawal (Coitus Interruptus)</p>	<ul style="list-style-type: none"> • Withdrawal may be the only method available to many adolescents. They should be fully informed about the technique. • Withdrawal method requires the man to know when he is about to ejaculate (point of no return) so he can withdraw in time. This may be difficult for some young men. • Withdrawal offers no protection against STIs (e.g., HBV, HIV).
<p>Fertility Awareness Method</p>	<ul style="list-style-type: none"> • Until adolescent woman has regular menstrual cycle, this methods should be used with caution. • Need a backup method or ECPs on hand in case abstinence fails. • No protection against STIs (e.g., HBV, HIV).
<p>Voluntary Surgical Contraception (Also see chapter on NSV and Minilap)</p>	<ul style="list-style-type: none"> • Sterilization is permanent method so not appropriate for adolescents in most circumstances. • Proper in-depth counseling must be done. Provide with great caution. Young people and people with few or no children are among those most likely to regret sterilization. • For female sterilization: WHO MEC - Category C (caution)

Note: WHO MEC - WHO Medical Eligibility Criteria—see appendix H

EMERGENCY CONTRACEPTION

18.1 INTRODUCTION

Emergency contraception is contraception provided to women to prevent unwanted pregnancy following an unprotected sexual intercourse.

In unprotected intercourse, and method failure (e.g., condom breakage), highly effective emergency methods are available to prevent unwanted pregnancy. Healthcare providers should regularly inform clients about emergency contraception. Family planning programmes should make emergency contraception available and accessible by:

- Providing emergency contraception services 24/7
- Having numerous providers who are familiar with its use
- Allowing packaging of oral contraceptives for use as emergency contraception (However, separate packaging for emergency contraception is available in Nepal.)
- Allowing providers, who do not typically initiate oral contraceptive pills, to provide the method and counsel clients to seek regular contraceptive services

18.1.1 Emergency Contraception Available/Approved in Nepal

While all contraceptives are appropriate before intercourse, several methods also can be used within a short time after unprotected intercourse. Often called “morning after pills,” it is more appropriate to call them secondary or emergency contraceptives. These names remove the idea that the user must wait until the morning after unprotected intercourse to start Emergency Contraception.

Women who may need this service (including those using barrier methods) should be aware of it and know where they can easily obtain it. Ready access is important because of the short time period after unprotected intercourse during which emergency contraception is likely to be effective. Health professionals to whom these women may turn should either be able to give the treatment themselves or refer the women as a matter of urgency to a suitable healthcare facility. Insertion of an IUCD with its necessary examination is more intrusive than the use of oral pills and may be unacceptable to some women, especially if they have only recently started sexual intercourse or are the victims of rape.

There are three main methods available in Nepal that can be used as emergency contraceptives. Some of these are available from health network of Ministry of Health and Population (MoHP) and some other are available through social marketing system. E-Con and Postinor are available through social marketing system. There are other brands available in the market as well. They are:

- Combined oral contraceptive pills (COCs)
- Intrauterine Contraceptive Devices (IUCDs) - Copper bearing IUCD
- Progestin-only pills (POPs)

ECP as available in the global market.

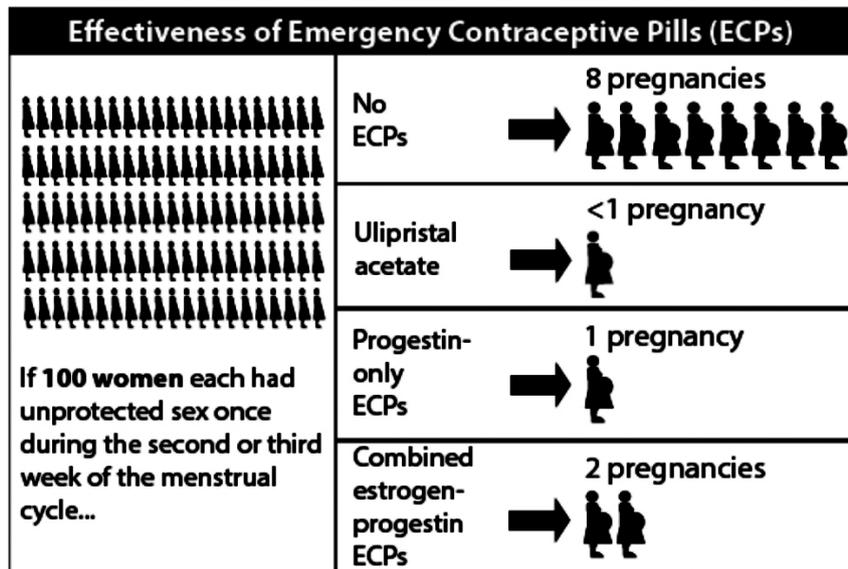
Though yet to be available in Nepal, **ulipristal acetate (UPA)** have been developed and in use in other countries. UPA is an anti-progestin; this may be more effective than other ECPs between 72 to 120 hours after unprotected sex. UPA is not intended for use as a continuing oral contraceptive.

Emergency Contraception Pills should not be used as a regular method of contraception. A woman who uses emergency contraceptive pills regularly is more likely to have an unintended pregnancy than a woman who uses another contraceptive regularly.

18.1.2 Effectiveness

- If 100 women each had sex once during the second or third week of the menstrual cycle without using contraception, 8 would likely become pregnant.
- If all 100 women used ulipristal acetate ECPs, fewer than one woman would likely become pregnant.
- If all 100 women used progestin-only ECPs, one would likely become pregnant.
- If all 100 women used estrogen and progestin ECPs, 2 would likely become pregnant.

Figure 18-1: Effectiveness of ECPs



* Ulipristal acetate is currently not available in Nepal.

Emergency Contraceptive Pills can be taken up to 120 hours after unprotected sex. However, the sooner it is taken, the better will be result.

18.1.3 Return of Fertility after Taking ECPs

Taking ECPs prevents pregnancy only from acts of sex that took place within 120 hours before. They will not protect a woman from pregnancy from acts of sex more than 24 hours after she takes ECPs. To stay protected from pregnancy, women must begin to use another contraceptive method.

18.2 SERVICE DELIVERY

18.2.1 Eligibility

Indications

Emergency contraception is meant to be used only following an unprotected sexual intercourse to prevent pregnancy. The following are number of situations when a woman can use or may need to use emergency contraception:

- Sexual assault
- Any unprotected sex
- Mistakes using contraception such as:
 - » Condom was used incorrectly, slipped, or broke
 - » Couple incorrectly used fertility awareness method (for example, failed to abstain or to use another method during the fertile days)
 - » Failure to withdraw, as intended, before ejaculation
 - » Woman has had unprotected sex after she has missed 3 or more combined oral contraceptive pills or has started a new pack 3 or more days late
 - » IUCD has come out of place
 - » Woman has had unprotected sex when she is more than 4 weeks late for her repeat injection of DMPA

If a woman is breastfeeding but not using LAM (refer to Chapter Thirteen: Post-partum Contraception and LAM) and thinks she might be at risk of pregnancy, emergency contraception may be used (except Estrogen containing).

CORRECTING MISUNDERSTANDING

Emergency contraceptive pills:

- Can be used by women of any age, including adolescents
- Do not cause abortion
- Do not prevent or affect implantation
- Do not cause birth defects if pregnancy occurs
- Are not dangerous to a women's health
- Do not increase risky sexual behaviour
- Do not make women infertile
- Can be used more than once in a woman's cycle

Precautions

Risk of already being pregnant

ECP does not disrupt existing pregnancy so it does not work if the woman is already pregnant. Therefore, before providing emergency contraception, be sure the client is not already pregnant (i.e., she might have become pregnant in the previous month). Symptoms of early pregnancy may include:

- Breast tenderness
- Nausea
- Change in the pattern of last menses (light flow, short duration, etc.)

If pregnancy is suspected, **before** providing emergency contraception, counsel the client regarding her options and the theoretical risk of potential problems if she is already pregnant. In general, a one-time use of oral contraceptives as emergency contraception would have no impact on an early, unrecognised pregnancy.

Risk to clients with vascular problems

Women who are at increased risk of vascular problems (current or past blood clotting problems, heart attack or stroke) should be advised of a slight additional risk of a serious complication if they use COCs or estrogen-only pills. COCs taken for a short duration (2 days) in a physically active client, however, are highly unlikely to cause a serious problem even in women with these risks. In addition, pregnancy causes a much greater risk to these women. Therefore, do not withhold treatment if the client requests it.

CONTRAINDICATION

There are no known contraindications to the use of hormonal emergency contraception. The dose of hormones used in emergency contraception is small and the pills are given for a short time, so the contraindications associated with continuous use of combined hormonal contraception do not apply.

IUCD as emergency contraceptives

Can be inserted 120 hours (5 days) after unprotected sex

- When the time of ovulation can be estimated she can have an IUCD inserted up to 120 hours (5 days) after ovulation. Sometimes, this may be more than 120 hours (5 days) after unprotected sex.
- If there is possibility of removal of IUCD in her next menses due to some contraindication to continuous use, then do not provide IUCD as EC.
- In case of pelvic infection or a condition that poses a risk of introducing infection (e.g., in a woman with purulent cervicitis) the use of an IUCD should be avoided.
- The possibility that the woman may already be pregnant should be excluded, since insertion of an IUCD increases the risk of abortion.

18.3 CLINICAL PROCEDURE

Emergency contraception is prescribed as two oral doses, taken 12 hours apart, of combined estrogen and progestin (COCs) initiated within 120 hours of sexual act or progestin alone (POPs) initiated within 120 hours of unintended exposure. Women may experience nausea, especially with the combined pill method, and an anti-emetic may be prescribed. Adequate absorption occurs in the first hour after ingestion, but if vomiting occurs before this interval the dose should be repeated with an anti-emetic.

IUCD insertion within 5 days of sexual act is highly effective for prevention of pregnancy. Note that many circumstances leading to a need for emergency contraception are not compatible with

safe use of the IUCD (e.g., possible risk of infection). Clients who receive an IUCD for emergency contraception should be followed up carefully to ensure that they remain good candidates for IUCD use.

18.4 SIDE EFFECTS

Some users report the following:

Changes in bleeding patterns including:

- Slight irregular bleeding for 1–2 days after taking ECPs
- Monthly bleeding that starts earlier or later than expected

In the week after taking ECPs, women may suffer from:

- Nausea
- Abdominal pain
- Fatigue
- Headaches
- Breast tenderness
- Dizziness
- Vomiting

18.5 CLIENTS INSTRUCTIONS AND FOLLOW-UP

Clients should be given counsel and provided following instructions.

Table 18-1: Emergency Contraception

Methods	Timing	Remarks	Client Instructions
COCs	Should be taken within 120 hours of unprotected intercourse and repeated after 12 hours.	<ul style="list-style-type: none"> • 2% become pregnant <p>Side effects:</p> <ul style="list-style-type: none"> • Nausea • Vomiting • Breast tenderness, headache, dizziness • Irregular uterine bleeding: Some women may experience spotting. If menstrual period is delayed, the possibility of pregnancy should be excluded. • If pregnancy is not prevented, counsel client for antenatal care. 	<p>COCs (low-dose) contains norgestrel (progestin) 0.3 mg and ethinyl estradiol (estrogen) 0.03mg in each pill</p> <p>Take 4 tablets as soon as possible, within 120 hours after an unprotected sex</p> <p>↓</p> <p>12 hours later</p> <p>↓</p> <p>Take 4 more tablets</p> <p>Total = 8 tablets</p>

Methods	Timing	Remarks	Client Instructions
Progestin-only Pills (POPs)	Should be taken within 120 hours of unprotected intercourse at dose	<ul style="list-style-type: none"> • Effective only 1% become pregnant • Same side effects as with COCs but significantly less severe and nausea, vomiting is minimal • If pregnancy is not prevented, counsel client for antenatal care (ANC) 	POPs (0.75 mg levonorgestrel, e.g., Postinor®) Take 2 tablet stat as soon as possible within 120 hours after an unprotected sex OR ↓ (1.5mg levonorgestrel) 1 tablet single dose
IUCD	Should be inserted within 5 days of unprotected intercourse (120 hours after ovulation)	<ul style="list-style-type: none"> • Less than 1% become pregnant • Few side-effects • Provides long-term contraception as well • Failure increases with longer interval between unprotected intercourse and insertion • Insertion requires a minor procedure that must be performed by a trained service provider • Should not be inserted in women at very high risk for STIs (e.g., HBV, HIV/AIDS) • Women of all age group despite parity can use 	Counsel client about post-insertion spotting Help her understand how to distinguish this from a menstrual period

Clients who are provided emergency contraception should be counselled to expect a menstruation within 3–4 weeks. If the woman did not have a menstruation or delayed by more than 7 days, she should return to the clinic and a urine pregnancy test should be performed. If positive, they should receive counselling and referral for antenatal care.

After menstruation, she can come to clinic if she wants to have contraceptive method, who did not have one immediately.

Table 18-2: When to Start or Restart Contraception after ECP Use

Method	When to start or restart
Hormonal methods (COC, POP, DMPA, Implants)	<p>After taking progestin-only or combined ECPs:</p> <ul style="list-style-type: none"> • Can start or restart any method immediately after she takes the ECPs. No need to wait for her next monthly bleeding. • The continuing user of oral contraceptive pills who needed ECPs due to error can resume use as before. She does not need to start a new pack. • All women need to abstain from sex or use a backup method* for the first 7 days of using their method. • If she does not start immediately, but instead returns for a method, she can start any method at any time if it is reasonably certain she is not pregnant. <p>After taking ulipristal acetate (UPA) ECPs:</p> <ul style="list-style-type: none"> • She can start or restart any method containing progestin on the 6th day after taking UPA-ECPs. No need to wait for her next monthly bleeding. (If she starts a method containing progestin earlier, both the progestin and the UPA could be less effective.) • If she wants to use oral contraceptive pills, give her a supply and tell her to start on the 6th day after taking UPA-ECPs. • If she wants to use injectables or implants, give her an appointment to return for the method on the 6th day after taking UPA-ECPs or as soon as possible after that. • All women need to use a backup method from the time they take UPA-ECPs until they have been using a hormonal method for 7 days (or 2 days for progestin-only pills). • If she does not start on the 6th day, but instead returns later for a method, she may start any method at any time if it is reasonably certain she is not pregnant.
IUCD	<p>After taking progestin-only, combined, or UPA-ECPs:</p> <ul style="list-style-type: none"> • If she decides to use a copper-bearing IUCD after taking ECPs, she can have it inserted on the same day she takes the ECPs. No need for a backup method. • If she does not have it inserted immediately, but instead returns for the method, she can have the copper-bearing IUCD inserted any time if it can be determined that she is not pregnant. <p>Note: The copper-bearing IUCD can be used for emergency contraception. A woman who wants to use the IUCD for regular contraception can have it inserted for emergency contraception within the first 5 days (120 hours) after unprotected sex and then continue using it.</p>

Method	When to start or restart
Condom – male or female	After taking progestin-only, combined, or UPA-ECPs: Immediately.
Fertility awareness methods	After taking progestin-only, combined, or UPA-ECPs: Standard Days Method: With the start of her next monthly bleeding. Symptoms-based methods: Once normal secretions have returned. Give her a backup method to use until she can begin the method of her choice.
Female sterilization	After taking progestin-only, combined, or UPA-ECPs: The sterilization procedure can be done within 7 days after the start of her next monthly bleeding or any other time if it is reasonably certain she is not pregnant. Give her a backup method to use until she can have the procedure.

Table 18-3: Giving Emergency Contraceptive Pills

Condition	Instructions
Taking pill (start)	<ul style="list-style-type: none"> • She can take the pill or pills immediately. • If she is using a 2-dose regimen, tell her to take the next dose in 12 hours.
Common side effects	<ul style="list-style-type: none"> • Nausea, abdominal pain, possibly others. • Slight bleeding or change in timing of monthly bleeding. • Side effects are not signs of illness and they do not last long. Most women have no side effects.
Management of side effects	<p>Nausea:</p> <ul style="list-style-type: none"> • Routine use of anti-nausea medications is not recommended. • Women who have had nausea with previous ECP use or with the first dose of a 2-dose regimen can take anti-nausea medication such as 25–50 mg meclizine hydrochloride half an hour to one hour before taking ECPs. • Vomiting: <ul style="list-style-type: none"> » If the woman vomits within 2 hours after taking progestin-only or combined ECPs, she should take another dose. If she vomits within 3 hours of taking ulipristal acetate ECPs, she should take another dose. (She can use anti-nausea medication with this repeat dose, as above.) » If vomiting continues, she can take a repeat dose of progestin-only or combined ECPs by placing the pills high in her vagina. » If vomiting occurs more than 2 hours after taking progestin-only or combined ECPs, or 3 hours after taking UPA-ECPs, then she does not need to take any extra pills.

Continuing contraceptive	If possible, give her more ECPs to take home in case she needs them in the future. <ul style="list-style-type: none">• Explain that ECPs will not protect her from pregnancy from acts of sex more than 24 hours after she takes them. Discuss the need for and choice of ongoing pregnancy prevention and, if at risk, protection from STIs including HIV.• If she does not want to start a contraceptive method now, give her condoms or a cycle of oral contraceptives and ask her to use them if she changes her mind. Give instructions on use. Invite her to come back any time if she wants another method or has any questions or problems.• If possible, give her more ECPs to use in the future in case of unprotected sex. She may need them if she has unprotected sex again as soon as 24 hours after taking the previous ECPs.
Follow-up	Encourage her to return for an early pregnancy test if her monthly bleeding is more than 7 days late.

CHAPTER 19

INCREASING ACCESS OF LONG ACTING REVERSIBLE CONTRACEPTIVE (IUCD AND IMPLANTS) SERVICES THROUGH SATELLITE CLINICS

19.1 INTRODUCTION

Family Welfare Division has planned to expand FP services to reach all population including those unreached till now. The long-term, temporary methods like IUCD and Implants are available in less than half of the health facilities. However, provision of regular long-term temporary family planning services at peripheral level still remains a challenge. To address this situation, FWD and local governments plan to increase the access of these services through satellite clinics, the availability of long acting temporary family planning methods at health facilities. In these clinics it is imperative to ensure that the clients receive adequate counseling before and after insertion of Implants or IUCD. It is also equally important that the services for removal of these methods are available at the same site or other nearby health facilities, if the client requests for removal due to various reasons.

19.2 OBJECTIVE

The objective of satellite clinic is to reach the clients who want Long Acting Reversible Contraceptive (LARC) e.g. IUCD or Implants services but do not have access to them. This clinic would also provide an opportunity for the clients to fulfill their family planning needs by increasing method choice.

19.3 STEPS IN ORGANIZING SATELLITE CLINICS

- **Selection of site:**
 - The site should be a government health facility like PHC or HP.
 - Site selection should be based on need assessment, i.e.
 - Where there is high demand for such services but no access to them.
 - Where marginalized community resides.
 - Date of the service should be fixed after interaction and discussion with local government, community stakeholders, HFOMC or ward committees and FCHVs.
- **Prior to starting the satellite clinic, a visit to the site should be made to ensure the following:**
 - **Infection Prevention:** Ensure that the site will have infection prevention provisions like handwashing facility, protection from dust and smoke, adequate lighting system, etc.

- **Confidentiality:** Site should have separate areas for counseling, examination & service provision to maintain client's confidentiality.
 - **Furniture and Instrument:** Site should have adequate furniture, equipment and instruments to provide quality services (see Chapter 9 Implants and Chapter 10 IUCD). If equipment and instrument are not available in the site, satellite service team needs to carry.
 - **Staff:** Site should have appropriate technical and administrative staff.
- Prior to starting the services, all the staff in that site should receive orientation on the objective of satellite clinic, requirement of adequate instruments, equipment & furniture for provision of quality service, importance of proper counseling, eligibility criteria for selection of appropriate clients as well as other technicalities of service provision.
 - Information should reach the prospective clients timely: Prospective clients should get information on date, time and availability of services beforehand. This information can be disseminated through FCHV, community health workers, from health facility and BCC activities as well.
 - Preparing a list of the prospective clients beforehand: If possible, it is desirable to make a list of prospective clients before the actual service starts. This list will help in making necessary preparations in the most efficient way to ensure that there is adequate equipment, human resources, etc. for the provision of quality services. If the site does not have adequate equipment and human resources, satellite service team will carry equipment along with trained human resource.
 - In between the timing of satellite clinics there should be a service provider in that site who can adequately address client's problems and queries and follow-up visits.
 - Satellite clinics for IUCD and Implants should be organized periodically at certain intervals throughout the year (For example: once in every two weeks or monthly on fixed date and time).
 - **Based on demand for LARCs, identify health workers to be trained on Implants and IUCD for the long run.**

19.4 RECORD KEEPING AND REPORTING

The record keeping and reporting of the services given through satellite clinics are similar to services provided at health facilities. The services provided from these satellite clinics should be recorded in fact sheets and service register in the health facility and these records should be ultimately incorporated during reporting from the health facility itself.

19.5 COACHING AND MENTORING

If service providers working in the health facility where satellite clinics for LARC services are being organized meet the criteria, this opportunity should be used to coach and mentor them.

The criteria are as follows:

- Previously trained on LARC (IUCD or Implants) but has not provided services for long time so presently lacks confidence in providing LARC services.
- Those who are recently trained but need additional clinical exposure on LARC (IUCD or Implants) and interested to provide LARC services, or
- Provider needs standardization of clinical skills as per the national medical standard.

The coach should also be very proficient service provider for LARC with coaching skills (received coach preparation training conducted by NHTC).

APPENDIX

APPENDIX A (III)

Government of Nepal
Ministry of Health, Dept of Health Services
HMIS 1.4 Referral/Transfer Slip

नेपाल सरकार स्वास्थ्य तथा जनसंख्या मन्त्रालय स्वास्थ्य सेवा विभाग स्वास्थ्य व्यवस्थापन सूचना प्रणाली प्रेषण/स्थानान्तरण पूर्जा		नेपाल सरकार स्वास्थ्य तथा जनसंख्या मन्त्रालय स्वास्थ्य सेवा विभाग स्वास्थ्य व्यवस्थापन सूचना प्रणाली प्रेषण/स्थानान्तरण पूर्जा	
१. संस्थाको नाम, ठेगाना:	मिति: ... / ... / २०७ ...	(सेवा दिएको विवरण तथा फिर्ती जानकारी) मिति: ... / ... / २०७ ...	
३. सेवाग्राहीको नाम, थर:	२. सम्पर्क नं.		
४. ठेगाना: जिल्ला: नगर/गाउँपालिका:	४. लिङ्ग: ५. उमेर: वडा नं.	फिर्ती जानकारी पठाइएको संस्था श्री / / २०७ / / २०७ ...	
७. लिइरहेको सेवा:	८. सम्पर्क गर्नुपर्ने मिति: / / (ग.म.सा.)		
९. अवस्था:	BP Pulse Temp Respiration Weight (kg) Height (cm) MUAC (mm) Edema on both Feet (+ / ++ / +++)	सेवाग्राहीको नाम, थर: लिङ्ग: उमेर: ठेगाना: जिल्ला: नगर/गाउँपालिका: वडा नं. सम्पर्क गर्न आएको मिति: ... / ... / २०७ ... दिइएको सेवा: फिर्ती जानकारी दिनेको नाम: पद: सही: मिति: ... / ... / २०७ ...	
१०. उपचार विधि वा रेजिमेन:	क्षयरोगका विरामीको लागि थप विवरण		
११. प्रयोग भएको औषधी:	क्षयरोगको प्रकार: दर्ता बर्गिकरण: खकार परिक्षण नतिजा मिति ल्याब नं. परिणाम अन्य परिक्षणको नतिजा	फिर्ती जानकारी दिने संस्थाको नाम: जिल्ला: नगर/गाउँपालिका: वडा नं.	
१२. अन्य परिक्षण गर्नपर्ने भए उल्लेख गर्ने:	क्षयरोगको प्रकार: दर्ता बर्गिकरण: खकार परिक्षण नतिजा मिति ल्याब नं. परिणाम अन्य परिक्षणको नतिजा		
१३. स्थानान्तरण/प्रेषण गरिनुको कारण:	क्षयरोगको प्रकार: दर्ता बर्गिकरण: खकार परिक्षण नतिजा मिति ल्याब नं. परिणाम अन्य परिक्षणको नतिजा	फिर्ती जानकारी दिने संस्थाको नाम: जिल्ला: नगर/गाउँपालिका: वडा नं.	
१४. अन्य केही भए उल्लेख गर्ने:	क्षयरोगको प्रकार: दर्ता बर्गिकरण: खकार परिक्षण नतिजा मिति ल्याब नं. परिणाम अन्य परिक्षणको नतिजा		
श्री	क्षयरोगको प्रकार: दर्ता बर्गिकरण: खकार परिक्षण नतिजा मिति ल्याब नं. परिणाम अन्य परिक्षणको नतिजा	फिर्ती जानकारी दिने संस्थाको नाम: जिल्ला: नगर/गाउँपालिका: वडा नं.	
यस संस्थामा सेवा लिन आएका उपरोक्त विवरण भएका व्यक्तिलाई आवश्यक सेवाका लागि त्यहाँ पठाइएको छ। सम्पर्क गर्न आएपछि फिर्ती जानकारी पठाई दिन हुन अनुरोध छ।	क्षयरोगको प्रकार: दर्ता बर्गिकरण: खकार परिक्षण नतिजा मिति ल्याब नं. परिणाम अन्य परिक्षणको नतिजा		
प्रेषण / स्थानान्तरण गर्नेको नाम:	पद: सही:	फिर्ती जानकारी दिने संस्थाको नाम: जिल्ला: नगर/गाउँपालिका: वडा नं.	
नोट: सेवा लिन आउने विरामीहरूसेवाग्राहीहरू तोकिएको सेवा लिन अनुमूल पत्रै नगरी स्थानान्तरण प्रेषण गर्नु पर्दो यो फारम प्रयोग गर्नु पर्दछ।	पद: सही:		
पारिभाषिक: २०७०/७१			

Print FY: 2074/75

APPENDIX A (IV)
Government of Nepal
Ministry of Health, Dept of Health Services
HMIS 1.5 Defaulter/Discontinuation Tracing Slip

HMIS 1.5: Defaulter/ Discontinuation Tracing Slip

	नेपाल सरकार स्वास्थ्य तथा जनसंख्या मन्त्रालय स्वास्थ्य सेवा विभाग स्वास्थ्य व्यवस्थापन सूचना प्रणाली
---	---

... .. जिल्ला				
डिफल्टर/अनियमितता खोज पुर्जा				
श्री				
निम्न व्यक्तिको अनुगमन गरी नियमित सेवा लिन उत्प्रेरित गर्नुभई प्रतिवेदन दिनुहोला।				
१. नाम, थर		लिङ्ग	उमेर	
२. ठेगाना	जिल्ला	नगर/गाउँपालिका	वडा नं.	गाउँ/टोल
३. सम्पर्क नं.		४. घरमूलीको नाम		
५. लिइरहेको सेवा		६. सेवा लिन आउनुपर्ने मिति		
५. अनुगमन गर्न लगाउने व्यक्तिको	नाम, थर	पद	सही र मिति	

(डिफल्टर/अनियमितता खोज गर्ने व्यक्तिले भर्ने)				
श्री				
सम्पर्क गरेको मिति	डिफल्टर/अनियमित हुनुको कारण			
अनुगमन गर्नेको	नाम, थर	पद	सही र मिति	
नोट: सबै प्रकारको नियमित सेवा लिन आउनुपर्ने बिरामीहरू/सेवाग्राहीहरू तोकिएको समयमा सेवा लिन नआएमा अनुगमन गर्न यो फाराम प्रयोग गर्नु पर्दछ।				

APPENDIX A (V)
Government of Nepal
Ministry of Health, Dept of Health Services

HMIS 3.1 FP Face sheet

नेपाल सरकार स्वास्थ्य तथा जनसंख्या मन्त्रालय स्वास्थ्य सेवा विभाग स्वास्थ्य व्यवस्थापन सूचना प्रणाली परिवार नियोजन सेवा कार्ड		अनुगमन, परीक्षण, उपचार र सल्लाह शिवायत/निदान सेवा लियको मिति फर्केर आउने मिति		
दत्तौ नम्बर:	जिल्ला	गते	महिला	सात
स्वास्थ्य संस्थाको नाम	जिल्ला	नगर/गाउँपालिका	शिक्षा	वडा नं.
सेवा लिनै ट्यक्तिको ठेगाना	नाम र थर	जारीकोड	उमेर	पेशा
विवरण	नाम र थर	जारीकोड	उमेर	पेशा
सेवाग्राहीको पति/पत्नीको	नाम र थर	जारीकोड	उमेर	पेशा
हाल सम्मको जन्म सम्बन्धी विवरण				
जोषित जन्म संख्या	साल	जोषित बच्चाहरूको उमेर (कम देखि बढी उमेरसम्म क्रमशः उल्लेख गर्नु)	कैफियत	आखिरी जन्मसाल भएको मिति
छोरोहरू				गते
छोराहरू				महिला
पिल्स				साल
डिपोमेब्रा	आइ.यु.सी.डी	इम्प्लान्ट	अन्य	नगरेको
शारीरिक समस्या भएर	आयुष्यक नभएर	अन्य (खुलाउने)		
चिकित्सा सम्बन्धी विवरण (हर्नोतल साधन लिनै सेवाग्राहीका लागि) गोली घेरा लगाउनुहोस् ।				
१. खुट्टा सुन्चिने र छिटो सास चल्ने रोग	छ	छैन	६. कमलपित रोग लागेको	छ
२. गर्भोपस्थामा खुट्टा सुन्चिने र दुखे रोग लागेको	यियो	यिचन	७. चिलीको रोग भएको	छ
३. रजस्वला मासिक रूपमा	हुन्छ	हुँदैन	८. बेस्पर्सी टाउको दुखे	छ
४. दुई रजस्वला बीच रक्तस्राव	हुन्छ	हुँदैन	९. स्तनमा गाँडा गुठो	छ
५. रजस्वला अघि/पिछा रक्तस्रावको परिमाण	थोरै	धेरै	सामान्य	
चिकित्सा सम्बन्धी विवरण (आइ.यु.सी.डी.का लागि) गोली घेरा लगाउनुहोस् ।				
१. तल्लो पेट दुख्ने समस्या:	छ	छैन		
२. गन्सोउने पानी बग्ने समस्या:	छ	छैन		
३. तीन महिना भन्दा ढाँडेर सम्बन्धी संक्रमणको उपचार गरेको	छ	छैन		
आकस्मिक गर्भ निरोधको लागि प्रयोग गर्ने लागेको भए निम्न विवरण भर्नुहोस्:				
१. असुरक्षित यौन सम्पर्क भएको मिति (गते/महिना/साल)	ग	म	सा	
२. अब प्रयोग गर्ने चाहिने साधन:				
साधनको नाम	सुरु गरेको मिति	सेवा प्रदान गर्नेको नाम र थर	दर्साखत	कैफियत
सेवा लियको मिति	शिवायत/निदान	अनुगमन, परीक्षण, उपचार र सल्लाह		
फर्केर आउने मिति	शिवायत/निदान	उपचार/सल्लाह/सुझाव	फर्केर आउने मिति	ग
				म
				सा

APPENDIX- B (I)

IMPLANT INSERTION AND REMOVAL EQUIPMENT AND SUPPLIES

Non-Expendable Equipment (insertion set)		
Name of equipment/Supplies	Unit	Quantity per set
Syringe, disposable 5 ml	Piece	1
Needle 22 Gauge x 2"	Piece	1
Mosquito forceps, curved 5"	Piece	1
Dissecting forceps (Non-toothed)	Piece	1
Implant trochars with canula	Piece	1
Sponge holding forceps	Piece	1
Small metal bowl	Piece	2
Cheatle forceps with jar	Piece	1
Removal set		
Kidney tray	piece	1
Sponge holder	Piece	1
Syringe, disposable 5 ml	Piece	1
Needle 22 Gauge x 2"	Piece	1
Knife holder (No 3)	Piece	1
Surgical blade size 11	piece	1
Mosquito forceps, curved 5"	Piece	1
Ring/ craft forceps curved 5.5"	Piece	1
Small metal bowl	Piece	2
Other Items		
Wrapping towel	Piece	1
Arm drapes with central hole	Piece	1
Small hand towel	Piece	1
Butterfly or plain band-aid	Piece	100
Sterile surgical Gloves size 6 ½	Pair	50
Sterile surgical Gloves size 7	Pair	50
Gauze 4" X 4"	Pack	600
Roller bandage 3"	Roll	25
Jadelle Implants	Set	100
Local anaesthetic 1% Xylocaine 30 ml	Vial	15
Bar soap	Piece	5
Betadine antiseptic solution 500 ml	Bottle	2

APPENDIX C (I) IUCD EQUIPMENT AND SUPPLIES

Non-Expendable Equipment		
Insertion set		
Name of equipment/Supplies	Unit	Quantity per set
Vaginal speculum, medium	Piece	1
Sponge holding forceps	Piece	1
Small metal bowl (Galley pot)	Piece	1
Cervical tenaculum/Volsellum	Piece	1
Uterine sound	Piece	1
Scissors, Long Handled	Piece	1
Torch/Flashlight, two cell	Piece	1
Long curved artery forceps	Piece	1
Cheatle forceps with Jar	Piece	1
Kidney Tray (Big size)	Piece	1
Removal set		
Kidney tray	Piece	1
Speculum	Piece	1
Sponge holder	Piece	1
Small metal bowl	Piece	1
Volsellum	Piece	1
Long artery forceps/ alligator	Piece	1
Cheatle forceps with jar	Piece	1
Expendable Supplies for 100 cases		
Copper- T 380 A	Piece	100
Bar soap	Piece	5
Torch with batteries, size D	Piece	1
Surgical gloves, size 6	Pair	50
Surgical gloves, size 7	Pair	50
Gauze	Roll	2
Betadine solution 500 ml	Bottle	2
Instrument wrapping cloth 18" sq	Piece	2 per IUCD set
Small hand towel (inside set)	Piece	1 per IUCD set

APPENDIX D (I)**VSC INFORMED CONSENT FORM**

I, _____, the undersigned, (client's name) request that a sterilization via _____ be performed on me. (specify the procedure)

I make this request of my own free will, without having been forced or given any special inducement. I understand the following:

1. There are temporary methods of contraception available to me and my partner.
2. The procedure to be performed on me is a surgical procedure, the details of which have been explained to me.
3. This surgical procedure involves risks, discomfort and complication in addition to benefits, both of which have been explained to me.
4. If the procedure is successful, I will be unable to have any more children.
5. The procedure is less than 100% effective.
6. The effect of the procedure is permanent.
7. I can decide against the procedure at any time before the operation is performed (and no medical, health, or other benefits or services will be withheld from me as a result).

Signature or mark of client

Date

Signature of attending physician/
counselor or delegated assistant

Date

If the client cannot read, a witness of the client's choosing, of the same sex, and speaking the same language must sign the following declaration:

I, the undersigned, attest to the fact that the client has affixed his/her thumbprint or mark in my presence.

Signature or mark of witness/guardian

Date

APPENDIX D (II) EMERGENCY DRUGS AND EQUIPMENT REQUIRED FOR VSC

Drugs:

SN	Contents	No. in Kit
1	Epinephrine (Adrenaline) 1:1000/ml vial	2
2	Hydrocortisone/Dexamethasone (Decadron) 4 mg/ml in 2 ml vial	4
3	Naloxone (Lethidrone) 0.4 mg in 1 ml vial	1
4	Promethazine (Phenergan) 50 mg in 2 ml vial	2
5	Atropine 0.6 mg/cc in 1 ml vial	2
6	Diazepam (Calmose) 5 mg/ml in 2 ml vial	2
7	Pethidine Chloride (Pethidine) 50 mg/ml in 2cc vial	2
8	Pheniramine (Avil) 25 mg/ml in 2ml vial	2
9	Pheniramine (Avil) 25 mg tablets	10 tablets
10	Lignocaine (Xylocaine) 1% or 2% 20ml vial	1
11	Pentazocine (Fortwin) 30 mg	10 tablets
12	Bottles Ringer's Lactate solution, 540 ml	2
13	Inj physostigmine	1
14	Sodium bicarbonate 7.5%	1
15	Calcium gluconate 10%	1
16	Furosemide	1
17	Dopamine	1
18	Dextrose 5% in normal saline	1
19	Glucose 25%	1
20	Inj. Oxylocard	1

Equipment:

1	Ambu Bag and Mask(adult size)	1
2	Oxygen cylinder, regulator, flow meter and key	1
3	Oral airway	1
4	Nasal airway	1
5	2.0/3.0 (polyglycolic (vicryl)/Chromic gut suture with round body needle	2
6	Syringes and needles	5
7	Oxygen tubing and mask	1
8	IV Infusion sets	2
9	16 or 18 gauge IV cannulas	2
10	Foly's catheter with urobag F 14&16	

All staff should be familiar with the location and proper use of the emergency equipment and drugs.

APPENDIX D (III) VSC SITE CRITERIA

1. Sterilization System:	A functioning autoclave with two drums by trained staff in of proper use of autoclave. Adequate space to clean sort and pack instruments and supplies. Place to wash and dry instruments/linen with adequate water supply.
2. Facility:	Adequate no. and size of rooms to accommodate all areas needed for VSC services, cleanable and having adequate lighting. If mobile VSC services are at health facility, regular services should not be disrupted.
OT:	Electricity and lights available with functioning generator backup, adequate space for OT team to perform work, able to isolate room from rest of facility.
Scrub area:	Running water or temporary water tank situated adjacent to OT area should be present.
Waiting, Registration, Screening, lab and recovery room:	All must have adequate lighting, privacy and size to comfortably manage clients and as workplace for staff. Private area for counseling and client screening.
Staff housing:	In or near facility adequate and comfortable housing for VSC staff to sleep, relax and eat
Storage area	Room/space to store supplies
Toilet	Clean separate area with water supply
Waste disposal area	Area to dispose waste properly.
Compound	Parking area for VSC vehicle that is available for emergency transport of client and returning clients to residences if applicable
Equipment, Instruments and Supplies:	All equipment and supplies required for VSC services to be available and functional. Unusable or broken items must be repaired or replaced before services commence (see Appendix E (II) and F (II) for list of equipment and supplies)
Emergency Equipment/Supplies:	All emergency equipment and supplies [see Appendix D (II)] should be available
3. Medications:	All medications required for pre-surgery, intra-surgery must be available with adequate supplies All emergency medications must be available and in adequate supply
4. Staff:	Facility site manager must be identified all staff must be available and properly trained per standard

APPENDIX E (I)
Government of Nepal
Ministry of Health and Population, Department of Health Services
Family Welfare Division

MINILAP

1. Name of facility:

2. Municipality (District):

Reg. No.

Name of client:

I. MENSTRUAL HISTORY

Date of last menstrual period

Duration of flows (in days)

Intermenstrual bleeding

Scanty

Moderate

Heavy

Discharge

Normal

Abnormal

II. MEDICAL HISTORY

Pregnancy

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

Hypertension

Allergy

Jaundice

Abdominal mass

Diabetes

Post-coital bleeding

Others (Specify) _____

III. PHYSICAL EXAMINATION

Pulse:

Resp:

BP:

Weight:

Temp:

Nor- mal	Abnor- mal
<input type="checkbox"/>	<input type="checkbox"/>

P/S Exam:

Discharge:

Normal

Abnormal

P/V Exam:

Skin

Uterus size:

Normal

Bulky

Lungs

Uterus position:

Heart

Mobility:

Yes

No

Abdomen

Uterine cervix:

Unhealthy

Healthy

Adnexa:

Normal

Abnormal

IV. LABORATORY

Hemoglobin:

gm

%

Signature of operating Physician.....

Urine:

Glucose	Yes	No
Protein	Yes	No

Yes

No

Others _____

Signature of Lab. Tech Date

V. PRE OPERATIVE

Hours since last food or drink.....

Diazepam given.... mg minutes prior to surgery (P.O.)

VI. SURGICAL NOTE

Surgeon..... Assistant.....

Swab and instrument counted by.....

VII. TOTAL MEDICATIONBefore surgeryDuring operation

Given by Given by.....

After operation

Given by

VIII.**MONITORING RECORDS**

Premedication: BP Pulse

Prior to analgesia:

At the end of surgery:

Recovery room:

At time of discharge:

Additional Notes:

Wound bleeding: Yes No

Vomiting: Yes No

Bleeding PV: Yes No

APPENDIX E (II)
EXPENDABLE SUPPLY ESTIMATES FOR
MINILAP (1,000 CASES)

MINILAP		
Description	Unit	Total Quantity Needed
1. Roller Bandage, 3"	Roll	200
2. Cotton, 400 gm	Roll	20
3. Gauze Cloth, 18 x 1 m	Than	30
4. Adhesive Tape 4"x 5 m	Roll	50
5. Sterile surgical Gloves Glove # 6.5	Pair	1,333
6. Glove # 7	Pair	333
7. Glove Powder, 1 lb	Packet	30
8. 5 cc Disposable Syringe	Each	1,000
9. 10 cc Disposable Syringe	Piece	1500
10. Surgical Blade # 10	Each	1,000
11. Cu. Cut. Needle # 10/ 11	Pack (1x6)	35
12. Round Body Needle # 10/11	Set	35
13. Catgut Plain # 1/0	Each	500
14. Catgut Chromic 1/0	Each	500
15. Xylocaine Inj. 1% 30 ml	Vial	700
16. Liq. Povidine iodine , 500 ml	Bottle	50
17. Chlorine powder/solution	Pack	50
18. Rectified Spirit 450 ml	Bottle	10
19. Diazepam 5 mg Tablet	Each	2,000
20. Ciprofloxacin (for indicated cases only)	Each	12,00
21. Multivitamin Tablet	Each	14,000
22. Tab Iron	Each	14,000
23. Tab. Ibuprofen 400 mg	Each	10,000
Or		
26. Inj. (Pentazocine)	Ampule	1000
27. Inj. Atropine 0.6 mg	Ampule	1000
28. Glycerine solution		

Note : non expendable instruments is not illustrated . please refer to mini- laparotomy reference manual (NHTC) appendix J and FWD specification guideline

APPENDIX E (III)
Government of Nepal
Ministry of Health and Population, Department of Health Services
Family Health Division

**POSTOPERATIVE INSTRUCTIONS FOR THE FEMALE
VSC CLIENT
(WRITTEN AND ORAL)**

1. Rest until she feels comfortable. Resume normal activities as you gradually become more comfortable.
2. Can resume sexual activity when she is comfortable.
3. Avoid strenuous lifting for one week to allow the incisions to heal.
4. Return to the clinic or contact the clinic or doctor promptly if you develop post-operative danger signs.
5. Take 1 or 2 analgesic tablets at 4 to 6 hour intervals if you need them for pain. (Do not use aspirin since it may promote bleeding).
6. You may bathe 48 hours after surgery, but avoid putting tension on the incision and do not rub or irritate the incision for 1 week. Dry the incision site after bathing.
7. Stitches will dissolve and do not require removal. (Note: this instruction must be modified if non absorbable sutures, such as silk, are used).
8. Return to the clinic 1 week after the procedure to make sure that the healing process is normal.
9. If you think you are pregnant at any time in the future, return to the clinic immediately. Pregnancy after female surgical contraception is rare. But if pregnancy does occur, there is an increased chance that it will be outside the uterus (womb). This is a dangerous condition and must be treated by a health facility staff/doctor. (Note: give name of doctor, clinic address, telephone number etc).

APPENDIX F (I)
Government of Nepal
Ministry of Health and Population, Department of Health Services
Family Welfare Division

VASECTOMY

1. Name of facility: _____ 2. Municipality (District) _____ Reg. No. _____

Name of client : _____

I. MEDICAL HISTORY

	Yes	No
Previous Surgery	<input type="checkbox"/>	<input type="checkbox"/>
Allergy	<input type="checkbox"/>	<input type="checkbox"/>
Jaundice	<input type="checkbox"/>	<input type="checkbox"/>
Sexual Problem	<input type="checkbox"/>	<input type="checkbox"/>

Others (Specify) _____

III. OPERATIVE NOTE

Skin Preparation: Betadine Yes No
Local Anesthesia: Xylocaine 1%C.C.
Fascial Interposition: Yes No
Suture of vas: Silk, chromic catgut, cotton thread
Fulguration: Yes No

Surgical notes:

.....

.....

II. PHYSICAL EXAMINATION

	Normal	Abnormal		Normal	Abnormal
Scrotum	<input type="checkbox"/>	<input type="checkbox"/>	Hydrocele	<input type="checkbox"/>	<input type="checkbox"/>
Lungs	<input type="checkbox"/>	<input type="checkbox"/>	Vericocele	<input type="checkbox"/>	<input type="checkbox"/>
Heart	<input type="checkbox"/>	<input type="checkbox"/>	Hernia	<input type="checkbox"/>	<input type="checkbox"/>
Skin (Scrotal area)	<input type="checkbox"/>	<input type="checkbox"/>	Undescended Testes	<input type="checkbox"/>	<input type="checkbox"/>
			Previous Scrotal Surgery	<input type="checkbox"/>	<input type="checkbox"/>
			Scrotal Mass	<input type="checkbox"/>	<input type="checkbox"/>

Others (Specify) _____

Normal Abnormal Pain during procedure: None/Mild/Moderate/Severe

Intraoperative complications: Yes No

If yes, explain with treatment given.....

.....

Assistant Signed (Surgeon)

Date: Date

IV. DISCHARGE NOTE

Wound OK: Yes No

If no (specify)

Follow-up appointment given: Yes No

Discharge instruction given: Yes No

20 Condoms given: Yes No

Signed Date

APPENDIX F (II) FACILITIES AND EQUIPMENT FOR VASECTOMY

Instrument Packs: (Please also see NSV reference manual NHTC)

Depending on the anticipated number of clients at the operating facility, 10-20 instrument packs will be available. Each pack will contain the following items:

Instruments (No Scalpel Vasectomy)

Description	Unit	Quantity per set
1. Iodine Cup, 4 oz 1.5" high	Piece	1
2. Addison Forceps, 5"	Piece	1
3. Forceps, Artery, Straight, 5 1/2"	Piece	1
4. Forceps, Artery, Curved	Piece	1
5. Ringed Forceps, 4.0 mm ring	Piece	1
6. Ringed Forceps, 3.5 mm ring	Piece	1
7. Hemopoint/Dissecting Forceps for NSV	Piece	1
8. Iris Scissors, curved	Piece	1
9. Sponge Holding Forceps	Piece	1

Expendable Supplies

Description	Unit	Total Quantity Needed for 1000
OTHER ITEMS		
1. Gauze cloth 18 mts X 1 mt	Than	15
2. Cotton 400 gm	Roll	5
3. Gloves, sizes 6, 6.5, 7 and 7.5	Pairs	600
4. Glove powder 1 lb	Packet	20
5. Liq. Betadine 500 ml	Bottle	30
6. Tab. Cetamol 500 mg	Each	6000
7. Rectified Spirit 450 ml.	Bottle	10
8. Adhesive Tape 4" X 5"	Roll	10
9. Vit. B Complex Tablet	Each	14000
10. Lignocaine Inj. 1% 30 ml	Vial	180
11. Ciprofloxacin 500mg. Cap Cloxacillin, Metronidazole	Each	1200
12. Virex	Pack	50
13. Disposable Syringe 5 ml with 1.5", gauge 23-24 needle	Each	1000
14. Black Silk or Cotton thread	Roll	5

APPENDIX F (III)
Government of Nepal
Ministry of Health and Population, Department of Health Services
Family Welfare Division

**POSTOPERATIVE INSTRUCTIONS FOR THE MALE VSC
CLIENT
(WRITTEN AND ORAL)**

1. Following the surgery, return home and wearing a scrotal support or tight undergarment t. keep wound dry for 5 days You may be able to resume your normal activities after 2 or 3 days.
2. Avoid strenuous physical exercise for 1 week. Strenuous exercise means hard physical exertion or lifting or straining that could bring pressure to the groin or scrotum.
3. Do not shower or bathe for the first 2 days after vasectomy.
4. The stitches will dissolve and do not have to be removed. (**Note:** this instruction must be modified if non-absorbable skin sutures, such as silk, are used or if there are no skin sutures) with NSV no stitches are applied.
5. You may resume sexual intercourse when you feel that it would be comfortable; but remember, you are not sterile immediately. For many men, sperm will not be cleared from the tubes until after 3 months . Until then, use condoms or another method of birth control to prevent pregnancy. The best way of finding out if you are sterile is to do a semen study after 3 months
6. If you have pain or discomfort, simple analgesics taken at intervals of 4 to 6 hours usually give adequate relief. (Note: Name and doses should be specified).
7. It is important for you to know what is normal and what is abnormal following your surgery. There will probably be some pain and swelling in the scrotal region; the scrotum may be somewhat discolored. This is normal and should not worry you. Occasionally, blood from a tiny blood vessel may escape into the scrotum at the time of surgery, and bleeding may continue. Notify the doctor or the health worker if you have any of the danger signals or if you notice any other unusual body changes. He can return for follow up visit when necessary.

APPENDIX G (I)
Government of Nepal
Ministry of Health and Population, Department of Health Services
Family Welfare Division

SURGICAL COMPLICATION REPORT FORM

(This form should be filled by the physician who treated the complication and needs to submit to Family Health Division through the District Health Office/District Public Health Office or other concerning agency.)

Date: _____

1. Demographic Description of Clients:

Client's name: _____ Age: _____ Sex: M / F
 Address: _____ Municipality, _____ Ward, _____ District
 Number of live births (For female client only) _____
 Total number of pregnancies (For female client only) _____

2. Type of procedure/method:

Minilaparotomy Laparoscopy Vasectomy

Other procedure (specify) _____

Other method (specify) _____

Date of procedure/method _____

Location of procedure/method _____

Name of service site where complication occurred _____

Date of onset of complication (day/month/year) ____/____/____

3. Type of complication(s):

A. Complication related to anesthesia:

Respiratory arrest/depression Cardiac arrest Convulsions
 Allergic reaction Other (specify) _____

B. Unintended injury:

Injury to bladder Injury to testicle
 Injury to fallopian tube Injury to cervix
 Injury to bowel Uterine perforation
 Other (specify) _____

C. Bleeding:

Hemorrhage Hematoma

D. Infection:

Injection site abscess Wound infection Pelvic/Abdominal infection
 Scrotal Other (specify) _____

E. Pregnancy: _____

F. Other complication (specify) _____

4. Treatment:

Duration of treatment _____

Briefly describe management of the complication:

5. Outcome:

6. Describe any change in practice, training, or procedure made to prevent a recurrence of this type of complication:

7. Name of physician offering treatment: _____

Signature: _____

Name of institution: _____

8. Costs:

Description:	Amount
Physician's Fees	_____
Medicine	_____
Transportation	_____
Food	_____
Hospital bed charges	_____
Other	_____
Total	_____

APPENDIX G (II)
Government of Nepal
Ministry of Health and Population, Department of Health Services
Family Welfare Division

MINOR COMPLICATION REPORTING FORM

Name of Health Institution: _____ Municipality: _____

Name of service provider who treated the complication: _____

Name of client: _____

Address of client: District: _____ Municipality: _____

Type of FP methods used: _____

Place of FP method received: _____

Type of complications:

_____ Wound infection _____ Vaginal bleeding _____ Hematoma _____ Fever _____
Wound separation _____ Weakness/anemia _____ Pregnancy (failure)

Others (describe): _____

Cost (If any): _____

Name of In-charge: _____ Signature: _____

APPENDIX G (III)
Government of Nepal
Ministry of Health and Population, Department of Health Services
Family Welfare Division

FAMILY PLANNING DEATH INVESTIGATION FORM

Investigator(s) Name and Title:

1. Demographic Description of Client:

Client's name: _____ Age: _____ Sex: M / F

Address: _____ VDC/Municipality, _____

Ward, _____ District _____

Number of live births (For female client only) _____

Total number of pregnancies (For female client only) _____

2. Type of procedure/method:

Minilaparotomy Laparoscopy Vasectomy

Other FP method (specify) _____

Date of procedure/method _____

Location of procedure/method _____

Date of Death _____

Location of death _____

Probable Cause of Death _____

3. Names of staff assisting with procedure/method

Name	Title	Address

4. Names of staff treating client at time of death

Name	Title	Address

- 5. Findings from site visit where procedure took place (infection prevention practices, condition of equipment and supplies, emergency preparedness, aseptic technique, condition of facility, etc.)**

- 6. Findings from site visit where death occurred (if different location)**

- 7. Results of the Postmortem:**

- 8. Results of examination/tests of any supplies, medications or equipment that may have contributed to the death**

- 9. List of people interviewed (surgeon, OT staff, paramedic staff, family members, client's friends, field staff)**

Name	Title	Address

- 10. Attach a written narrative of the findings from the interviews conducted.**

11. Attach copies of all medical records related to the procedure and the death (pre-op, intra-op, post-op, consent form, lab findings, readmission, referral hospital, second surgery, etc.)

12. Attach a written summary of the findings from a review of the records.

13. Conclusions from Investigation:

14. Describe any change in practice, training, or procedure to prevent a recurrence:

15. Follow-up Recommended:

Form completed by (name and title): _____

Signature: _____

Name of institution: _____

Costs:

Description:	Amount
Physician's Fees	_____
Medicine	_____
Transportation	_____
Food	_____
Hospital bed charges	_____
Other	_____
Total	_____

APPENDIX H
Government of Nepal
Ministry of Health and Population
Department of Health Services

FINANCE SLIP

Name of Centre:	District:
Municipality:	Province:
Total No. of Family:	Date:
Preferred F.P. Contraceptive/s:	Name of Doctor:
Vasectomy (NSV)	
Tubal Ligation, Minilap, Laparoscopy	Signature:
Implant, IUCD	Assistant's Signature:
Client's Name, Surname:	
Address:	
Signature:	Approved by:
(Only for Doctors)	(Office In-charge)

APPENDIX I

MENSTRUAL CYCLE

Overview

Each month during the years between puberty and menopause, a woman's body goes through a number of changes to get it ready for a possible pregnancy. This series of hormone-driven events is called the menstrual cycle. During each menstrual cycle, an egg develops and is released from the ovaries. The lining of the uterus builds up. If a pregnancy doesn't happen, the uterine lining sheds during a menstrual period. Then the cycle starts again.

A woman's menstrual cycle is divided into four phases:

- menstrual phase
- follicular phase
- ovulation phase
- luteal phase

The length of each phase can differ from woman to woman, and it can change over time.

Menstrual phase

The menstrual phase or the menstruation (bleeding) is the first stage of the menstrual cycle. This phase starts when an egg from the previous cycle isn't fertilized. Because pregnancy hasn't taken place, the levels of the hormones, estrogen and progesterone drop. And the thickened lining of the uterus, which would support a pregnancy, is no longer needed, so it sheds through woman's vagina as bleeding. So, a period or the menstruation is the normal shedding of blood, mucus and endometrium (the lining of the uterus) through the cervix and vagina. Women may have period symptoms like: cramps, tender breasts, bloating, mood swings, irritability, headaches, tiredness, low back pain

On an average, women are in the menstrual phase of their cycle for 3 to 7 days. Some women have longer periods than others.

Follicular phase

The follicular phase starts on the first day of the period (so there is some overlap with the menstrual phase) and ends when ovulation occurs.

It starts when the hypothalamus sends a signal to the pituitary **gland** to release follicle-stimulating hormone (FSH). This hormone stimulates ovaries to produce around 5 to 20 small sacs called follicles. Each follicle contains an immature egg. Only the healthiest egg will eventually mature. (On rare occasions, a woman may have two eggs mature.) The rest of the follicles will be reabsorbed into woman's body. The maturing follicle sets off a surge in estrogen that thickens the lining of woman's uterus. This creates a nutrient-rich environment for an embryo to grow.

The average follicular phase lasts for about 16 days. It can range from 11 to 27 days, depending upon the cycle.

Ovulation phase

Rising estrogen levels during the follicular phase triggers the pituitary gland to release luteinizing hormone (LH). This is what starts the process of ovulation. Ovulation is when ovary releases a mature egg. The egg travels down the fallopian tube toward the uterus to be fertilized by sperm.

The ovulation phase is the only time during the menstrual cycle when a woman can get pregnant. The symptoms of the ovulation are:

- a slight rise in basal body temperature
- thicker discharge that has the texture of egg whites

Ovulation happens at around day 14 if you have a 28-day cycle — right in the middle of your menstrual cycle. It lasts about 24 hours. After a day, the egg will die or dissolve if it is not fertilized.

DID YOU KNOW?

Because sperm can live up to five days, pregnancy can occur if a woman has sex as much as five days prior to ovulation.

Luteal phase

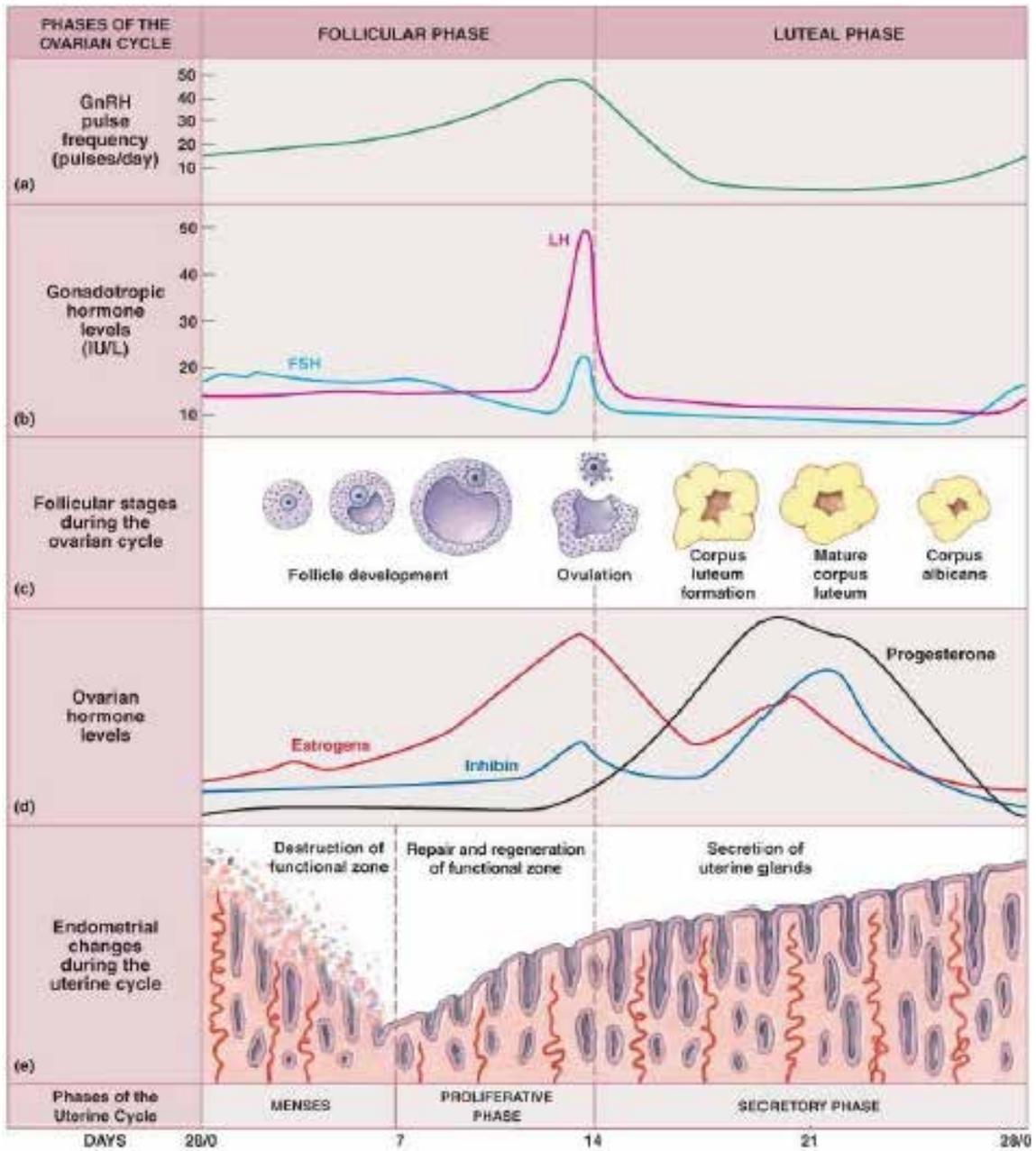
After the follicle releases its egg, it changes into the corpus luteum. This structure releases hormones, mainly progesterone and some estrogen. The rise in hormones keeps the uterine lining thick and ready for a fertilized egg to implant.

If woman gets pregnant, woman's body will produce human chorionic gonadotropin (hCG). This is the hormone, pregnancy tests detect. It helps maintain the corpus luteum and keeps the uterine lining thick.

If woman does not get pregnant, the corpus luteum will shrink away and be resorbed. This leads to decreased levels of estrogen and progesterone, which causes the onset of period or bleeding. And again, the uterine lining will shed through vagina and bleeding occurs.

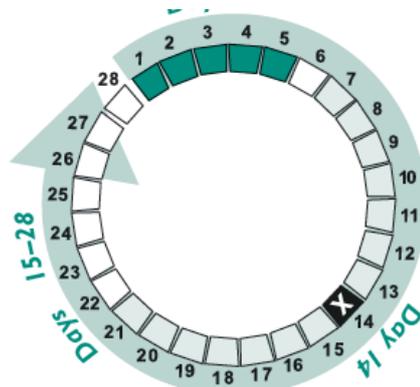
During this phase, if woman does not get pregnant, she may experience symptoms of premenstrual syndrome (PMS). These include: bloating, breast swelling, pain, or tenderness, mood changes, headache, weight gain, changes in sexual desire, food cravings, trouble sleeping

The luteal phase lasts for 11 to 17 days. The average length is 14 days.



Menstrual cycle and fertilization:

The monthly cycle of changes in the ovaries and the lining of the uterus (endometrium), starts with the preparation of an egg for fertilization. When ovulation occurs, the follicle of the prepared egg in the ovary breaks, and the egg is released for fertilization. Unless pregnancy occurs, the cycle ends with the shedding of part of the endometrium, which is menstruation. Although it is actually the end of the physical cycle, the first day of menstrual bleeding is designated as "day 1" of the menstrual cycle in medical parlance.



Days	Description	
Days 1-5 Monthly Bleeding	<i>Usually lasts from 2–7 days, often about 5 days</i> If there is no pregnancy, the thickened lining of the uterus is shed. It leaves the body through the vagina. This monthly bleeding is also called menstruation. Contractions of the uterus at this time can cause cramps. Some women bleed for a short time (for example, 2 days), while others bleed for up to 8 days. Bleeding can be heavy or light. If the egg is fertilized by a sperm, the woman may become pregnant, and monthly bleeding stops.	
Days 14 Release of egg	<i>Usually occurs between days 7 and 21 of the cycle, often around day 14</i> Usually, one of the ovaries releases one egg in each cycle (usually once a month). The egg travels through a fallopian tube towards the uterus. It may be fertilized in the tube at this time by a sperm cell that has travelled from the vagina.	
Days 15-28 Thickening of the uterine lining	<i>Usually about 14 days long, after ovulation</i> The lining of the uterus (endometrium) becomes thicker during this time to prepare for a fertilized egg. When there is no pregnancy, the unfertilized egg cell dissolves in the reproductive tract and with the drop in hormone level another menstrual cycle starts with bleedin	

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