Birth Spacing Guideline

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Sultanate of Oman

Ministry of Health

National Center of Women and Child Health

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ACRONYMS:

AIDS	Acquired Human Immunodeficiency Syndrome
ANC	Antenatal Care
ARV/ART	Antiretroviral/ Antiretroviral Therapy
BS	Birth Spacing
BSMIS	Birth Spacing Management Information Systems
BSID	Birth Spacing Identification Number
BP	Blood Pressure
COC	Combined Oral Contraceptive
CS	Caesarean Section
CVD	Cardio-Vascular Disease
DMPA	Depot Medroxy Progestin Acetate
DVT	Deep Vein Thrombosis
EC	Emergency Contraception
EPI	Expanded Program of Immunization
FRSH	Faculty of Reproductive and Sexual Health (FRSH)
GDM	Gestational Diabetes Mellitus
GTI	Genital Tract Infection
Hb	Hemoglobin
HBV	Hepatitis B Virus
HFI	Hormonal Free Interval
HIV	Human Immunodeficiency Virus
IDDM	Insulin Dependent Diabetes Mellitus
IUCD	Intra-uterine Contraceptive Device
JVP	Jugular Venous Pressure
MEC	Medical Eligibility Criteria
MOH	Ministry of Health of Oman
NGOs	Non-Governmental Organizations
NIDDM	Non-insulin Dependent Diabetes Mellitus
NSAID	Non-Steroidal Anti-inflammatory Drugs
PE	Pulmonary Embolism
PHC	Primary Health Care

PID	Pelvic Inflammatory Disease
Pap	Papanicolaou
POCs	Progestogen Only contraceptives
PNC	Postnatal Clinic
POPs	Progestogen Only Pills
STIs	Sexually Transmitted Infections
TID	Three Times Per Day
TPHA	Treponema Pallidum Haemagglutination Assay
UPSI	Unprotected Sexual Intercourse
VDRL	Venereal Disease Research Laboratory

DEFINITIONS[1]

Family planning	The ability of individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births. This is achieved through the use of contraceptive methods and the treatment of infertility. (WHO)
Contraception	Contraception also known as Birth control, is the use of medicines, devices, or surgery to prevent pregnancy. There are many different types. Some are reversible, while others are permanent. Some types can also help prevent sexually transmitted diseases (STDs).
Unmet Need for Family Planning	The percentage of women who want to stop or delay childbearing but are not using any method of contraception. This is a key indicator for monitoring reproductive health globally. (WHO) **Causes of Unmet Need**: Lack of access to family planning services, fear of side effects or health concerns about contraceptive methods, cultural or religious beliefs that discourage contraceptive use, etc. **Consequences of Unmet Need:** Increased risk of unintended pregnancies, **h**igher rates of maternal and infant mortality due to closely spaced or high-risk pregnancies etc.
Modern methods of contraception	Methods that are highly effective in preventing pregnancy and have fewer side effects, including: • **Hormonal methods:** COC, POP, Implant, Injection, hormonal IUCD • **Copper IUCD** • **Barrier methods:** Condoms (male and female), Diaphragms and cervical caps • **Permanent methods:** Sterilization (tubal ligation for women, vasectomy for men) • **Emergency contraception:** Emergency contraceptive pills or the copper IUCD used as emergency contraception. These methods are considered modern due to their proven effectiveness, safety, and accessibility compared to traditional or less effective methods of contraception.
Traditional	Methods that do not involve medical devices or hormonal interventions and

[1] Family Planning - A GLOBAL HANDBOOK FOR PROVIDERS – World Health Organization Department of Sexual and Reproductive Health and Research – EDITION 2022

methods of contraception	typically rely on behavioral or natural practices. These methods include: • **Periodic abstinence (calendar method):** The practice of avoiding sexual intercourse during the fertile window of the woman's menstrual cycle, based on the calculation of ovulation. • **Withdrawal (coitus interruptus):** The practice of the man withdrawing his penis from the vagina before ejaculation during intercourse. • **Lactational amenorrhea method (LAM):** A natural form of contraception that relies on exclusive breastfeeding and the absence of menstruation to prevent pregnancy, typically effective for up to 6 months postpartum. These methods are considered less reliable than modern methods of contraception and have a higher failure rate due to user error or variability in effectiveness.
Emergency contraception	Emergency contraception refers to methods of contraception that can be used to prevent pregnancy after unprotected sexual intercourse. It is most effective when used as soon as possible after the event, but can be used up to 5 days (120 hours) after intercourse, depending on the method. It is intended for occasional use and not as a regular contraceptive method. These methods include: • **Emergency Contraceptive Pills (ECPs)** • **The copper- IUCD** also can be used for emergency contraception.
Birth interval	**Birth- to birth interval** refers to the time period between two consecutive live births. Calculated from the difference between the birth date of child and the birth date of proceeding child in years **Birth-to-pregnancy interval** refers to the interval between the date of a live birth and the start of the next pregnancy. The WHO recommends an **interval of at least 24 months** between a live birth and the conception of the next pregnancy. This corresponds to a **minimum of 33 months** between two live births , in order to reduce the risk of adverse maternal, perinatal and infant outcomes
Contraceptive prevalence	The proportion of women of reproductive age (typically 15-49 years) who are currently using a method of contraception (either modern or traditional) at a given point in time. (WHO)

Medical eligibility criteria for contraceptive use (MEC)	A set of internationally agreed norms developed by WHO for providing contraception to individuals with a range of medical conditions that may contraindicate one or more contraceptive methods
Amenorrhea	The absence of menstrual periods. It is classified into two types: **Primary Amenorrhea:** The absence of menstruation by the age of 15 years in girls with normal secondary sexual characteristics (like breast development and pubic hair). **Secondary Amenorrhea:** The absence of menstruation for three consecutive months in women who previously had regular menstrual cycles and absence of menstruation for six consecutive months in women who previously had irregular cycles.
Infrequent bleeding also known as oligomenorrhoea	Menstrual bleeding that occurs at intervals of more than 35 days but less than 90 days. This condition is typically a result of infrequent or irregular ovulation and may be linked to factors such as polycystic ovary syndrome (PCOS), thyroid dysfunction, hyperprolactinemia, or stress-related hormonal imbalances.
Frequent bleeding also known as **polymenorrhea**	Menstrual cycles that occur at intervals of less than 21 days. Frequent bleeding can be caused by various factors, including hormonal imbalances, ovulatory dysfunction, uterine abnormalities (like fibroids or polyps), or other underlying health conditions.
Irregular bleeding	Bleeding that occurs at unpredictable intervals, with changes in the frequency, duration, or amount compared to the individual's usual menstrual pattern. This condition can include changes such as: • Bleeding that occurs **more frequently** or **less frequently** than usual. • **Heavy or light bleeding** compared to the individual's normal. • **Unpredictable bleeding patterns**, such as spotting between periods. Irregular bleeding may result from various causes, including hormonal imbalances, uterine fibroids, ovarian cysts, infection, or polycystic ovary syndrome (PCOS).

Menorrhagia	Menorrhagia refers to excessive or prolonged menstrual bleeding, typically defined as: • **Heavy menstrual bleeding** exceeding **80 mL per cycle** (normal is 30-40 mL). • **Menstrual periods lasting more than 7 days**. Menorrhagia can be caused by a range of factors, including uterine fibroids**,** endometrial polyps**,** hormonal imbalances**,** coagulation disorders, or other structural or medical conditions.
Backup method	A contraceptive method used in conjunction with another primary method to provide additional protection against pregnancy. This is typically used when the primary method may fail or is not used consistently or correctly. Examples of back-up methods include: • **Condoms** used with oral contraceptive pills or other hormonal methods. • **Emergency contraception (EC)** used after contraceptive failure or unprotected sex. Back-up methods are intended as a safeguard, helping to reduce the risk of unintended pregnancy in situations where the primary contraceptive method may not be effective.
Perfect use	**Perfect use** refers to the **ideal usage** of a contraceptive method, where it is used **correctly and consistently** according to the manufacturer's instructions, with no errors. This represents the **highest level of effectiveness** for a method when used exactly as recommended (e.g., taking the pill at the same time every day, using a condom correctly every time, etc.).
Typical use	**Typical use** refers to how a contraceptive method is actually used by the general population, taking into account **human error, inconsistent use, or misuse**. This includes situations where individuals may occasionally forget to use the method properly, such as missing a dose of birth control pills or not using condoms consistently during intercourse. As a result, typical use reflects a **lower level of effectiveness** than perfect use.

Types of referrals to higher level of care:

Routine appointment	Appointment should be given **within two weeks** or as requested by the referring doctor.
Urgent appointment	Appointment should be given **within 48 hours** in consultation with the concerned department.
Emergency referral	Patients should be **escorted immediately** with I.V. line has been inserted, via an ambulance and a medical attendance (nurse, midwife or a doctor). The doctor on-call in the referring hospital should be informed earlier by the phone

CHAPTER ONE

1.1 Introduction

Birth spacing is an important maternal and child health intervention. Research and studies have confirmed that healthy pregnancy timing and spacing are important interventions to improve infant, child, and maternal health.

Although every pregnancy carries a risk of maternal death or morbidity, some are at higher risk than others. Birth Spacing program attempts to reduce the risks related to pregnancy in the very young or elderly women, in multigravida, and in women with birth interval less than 2 years. The expected results of Birth Spacing Program are reduction of maternal morbidity and mortality (e.g. miscarriages, anemia, eclampsia etc.) and reduction of child morbidity and mortality (e.g. low birth weight, fetal death and early neonatal deaths etc.).

If all unmet need for modern contraception were satisfied, the impacts on women and their children would be dramatic:

- Unintended pregnancies would drop by 68%
- Unsafe abortions would drop by 72%
- Maternal deaths would drop by 62%
- Newborn deaths would drop by 69%
- New HIV infections among babies six weeks and younger would drop by 88%

In the Sultanate of Oman, the Birth Spacing Program was initiated on 1st October 1994 as an integral part of Maternal and Child Health services. The objective of the program was to allow women to space births by 3 or more years, to improve the survival and wellbeing of both child and mother. It started with the provision of four contraceptive methods (COC, POP, progestin only injection, and condom). In 1996 intrauterine contraceptive device (IUCD) has been added as a fifth method. Then Birth Spacing Program has been expanded further to include sub-dermal contraceptive implant that been introduced in 2017. These modern contraceptive methods are highly effective (more than 99%) compared to the natural methods which are less effective and user dependent.

Creating demand to birth spacing services through awareness campaigns was one of the Ministry of Health (MOH) strategies to strengthen the program. The first National Birth Spacing Campaigns was activated in 1994. The month of October was announced to be the awareness month for birth spacing annually, targeting different community groups including women and men in reproductive age group.

The current version of guideline contains an updated birth spacing information which are based on the latest available scientific evidences, from World Health Organization (WHO): "WHO Medical Eligibility Criteria for Contraceptive Use", 5th edition, WHO ,2015 and Family Planning - A Global Handbook for Providers – World Health Organization Department of Sexual and Reproductive Health and Research – edition 2022, which are considered as WHO Family Planning Cornerstones, as well as from other well-known international organizations such as Royal College of Obstetricians and Gynecologists (RCOG) – represented by Faculty of Reproductive and Sexual Health (FRSH), NICE guidelines and Centers for Disease Control and Prevention (CDC).

We recommend that to maximize the use, the manual should be kept in close vicinity of service provision and all the birth spacing providers should read it carefully.

1.2 Purpose

This guideline aims to provide evidence – based recommendations and good practice points for healthcare providers on the use and management of contraceptive methods to prevent pregnancy.

1.3 Scope

This guideline covers all methods of contraception currently available in MOH in the Sultanate of Oman which include: Combined Oral Contraceptives (COCs), Progestin Oral Pills (POPs), Progestin only Injection, Sub-dermal implant, Copper -IUCD and Condoms. It discusses overall effectiveness and failure rate, mechanism of action, indications, contraindications, non-contraceptive benefits, side effects and risks, provision of contraceptive methods; insertion and removal (for implants and intrauterine devices), family planning suitable for special groups e.g. adolescents, women above 40 years, women with medical conditions or different characteristics, counselling methods. It also covers the emergency contraception, and genital tract infections. In addition, it addresses tasks in birth spacing clinic and flow of clients in birth spacing clinic.

1.4 Structure of the guidelines

The guideline consists of the following chapters:

Chapter one introduces the guideline, along with the purpose and scope. It also provides the structural framework of the guideline that can help the reader access the different parts of this document with ease.

Chapter two covers all aspects of birth spacing care through the following sections: -

- Standards of Care
- Human Rights: Family planning provider's contribution
- Birth spacing service components
  - Service provision
  - Counselling on birth spacing
  - Community education/awareness on birth spacing
- Contraceptive methods:
  - Combined Oral Contraceptives (COCs)
  - Progestin Only Pills (POPs)
  - Progestin Only Injectable
  - Sub-dermal Implant
  - Copper- Intrauterine Device (Cu-IUCD)
  - Barrier Contraceptives: Condoms
  - Emergency contraceptives.
- Genital Tract infections

Chapter three this chapter outlines what is required for the implementation of the guidelines, including human resources, and roles and responsibilities of different stakeholders.

Chapter four comprises of the annexes section including document history and version control table, references and appendixes.

CHAPTER TWO

2.1. Standards of care

- Birth Spacing service is an integral part of the Maternal and Child Health services in the MOH in Sultanate of Oman. The MOH provides, through primary health care facilities a wide range of birth spacing services:
  - Information, education and counseling on contraception.
  - Clinical services providing methods of choice based on WHO medical eligibility criteria (MEC).
  - Management of side-effects /complications related to method use and provide follow- up care.
  - Conduct community awareness campaigns.
- Birth spacing (BS) services at MOH institutions are provided free of charge to all Omani women/couples or non-Omani married to Omani citizen who need and desire to plan their births.
- Woman should be encouraged to discuss birth spacing options with her partner.
- Trained doctors only should provide the modern contraceptive to first time users, first follow-up services to new users and manage side-effects/complications.
- Trained nurses and midwifes should provide BS counseling at any point during her reproductive cycle.
- Counselling on birth spacing should be carried out during antenatal period (3rd trimester), immediate post-partum period in hospitals, during the 2 weeks and 6 weeks' postnatal visits, and in the child health care /EPI clinics and chronic disease clinics.
- Registration of the client should take place at the parent institution where a birth spacing card (The Blue Card) is issued to the client. If the parent institution is not staffed with a trained clinical service provider, the first time BS client should be referred to a nearest health facility with trained doctor following the provision of initial counseling.
- The provision and management of the BS services should follow the recommendations set described in this guideline

2.2 Human Rights: Family planning Provider's Contribution

- All individuals and couples have the right: "…to decide freely and responsibly the number, spacing and timing of their children and to have the information, education, and means to do so, and the right to attain the highest standard of sexual and reproductive health..." – The Programme of Action of the International Conference on Population and Development (ICPD).
- Family planning providers have the privilege and responsibility to help people to make and carry out these decisions. Furthermore, programs that honor their clients' human rights contribute to positive sexual health outcomes. Thus, high-quality family planning services and the people who deliver them respect, protect, and fulfill the human rights of all their clients.
- Nine human rights principles were set by WHO, work and serve as the framework for guidance on contraceptive methods:

1. **Non-discrimination**
   - Welcome all clients equally
   - Respect every client's needs and wishes.
   - Set aside personal judgments and any negative opinions.
   - Promise to give every client the best care they can.

2. **Availability of contraceptive information and services**
   - Know the family planning methods available and how to provide them.
   - Help make sure that supplies stay in stock.
   - Do not rule out any method for a client, and do not hold back information.

3. **Accessible information and services**
   - Make sure that everyone can use the facility, even if they have a physical disability.
   - Participate in outreach, when possible.
   - Do not ask clients, to get someone else's permission to use family planning or a certain family planning method but rather encourage women to discuss birth spacing use with her husband.

4. **Acceptable information and services**
   - Be friendly and welcoming
   - Think what is important to the clients—what they want and how they want it provided.

5. **Quality**
    - Should keep their knowledge and skills up to date
    - Use good communication skills
    - Check the provided contraceptives are not out-of-date
6. **Informed decision-making**
    - Explain family planning methods clearly, including how to use them, how effective they are, and what side effects they may have, if any.
    - Help clients consider what is important to them in a family planning method.
7. **Privacy and confidentiality**
    - Should not discuss their clients with others except with permission and as needed for their care.
    - When talking with clients, they should find a place where others cannot hear.
    - They should not tell others what their clients have said.
    - Promptly put away clients' records.
8. **Participation**
    - Ask clients what they think about family planning services.
    - Act on what they say to improve care.
9. **Accountability**
    - Be accountable for the care provided to clients and for their rights.

Note:

The full statement of these principles can be found in Ensuring human rights in the provision of contraceptive information and services: 2014 (http://www.who.int/reproductivehealth/ publications/family planning/human-rights-contraception/en/)

2.3 Birth spacing service components

2.3.1 Service provision

1. **Target group**

Clients in reproductive age group willing to use the contraceptive methods. Healthcare providers should encourage birth spacing use especially for women with increased risk of having problems during pregnancy and delivery such as women who are:

- Under the age of 18, or over age 35
- Become pregnant less than 2 years after a previous live birth
- Become pregnant less than six months' post-abortion or post miscarriage
- Grand multiparous
- Have certain existing health conditions that make pregnancy a risk

2. **Who provides the service?**
   - Trained doctors should provide service to first time users and during their first follow-up visit, manage side-effects/complications, conduct annual assessment and assess those requesting switch to another method.
   - Trained nurse/midwife can provide resupply of methods in follow up visits for women with no complaints.
3. **Where the service is provided?**

- **Primary Health Care (PHC) institutions with trained doctors:**
  - Will provide the method on first and follow-up visits.
  - Refer the client with severe side-effects or complications to specialty clinics.
- **PHC institutions with no trained doctors:**
  - Will refer the clients to the nearest facility with trained doctor, where they will be provided with contraceptive method, and they will be followed. Then, these clients will be referred back to their parent institution.

4. **What modern contraceptive methods provided by the MOH?**

The MOH provides six types of contraceptive methods that are highly effective:

- **Combined Oral Contraceptives pills (COC)**
- **Progestin Only Pills (POP)**
- **Progestin Only Injection**
- **Subdermal Implant**: Impalnon NXT
- **IUCD:** Copper T 380 A
- **Condoms**

The following table (1): demonstrate the effectiveness of each method in comparison with other methods. It presents the percentage of women experiencing an unintended pregnancy within the first year of use with typical use and perfect use (adopted from modified Trussell et al. 56)

Table 1: Percentage of women experiencing an unintended pregnancy within the first year of use with typical use and perfect use (adopted from modified Trussell et al. 56)

Method of contraception	Failure rate with Typical use (%)	Failure rate with Perfect use (%)	Advantages	Disadvantages
No method	85	85	No contraindications or side effects	Risk of unintended pregnancy
Natural methods	24	0.4–5	No contraindications or side effects	High failure rate Teaching required
Male condom	18	2	Barrier to transmission of STIs	High failure rate User dependent Allergy
Combined hormonal contraception (COC)	9	0.3	Regular cycle, lighter periods Decrease dysmenorrhea	Poor compliance Side effects Increase risk of breast cancer and thromboembolism
Progestin-only pill (POP)	9	0.3	Few side effects /contraindications	Poor compliance Irregular bleeding Progestin side effects
Progestin-only injectable	6	0.2	Avoid pills taking Can help premenstrual symptoms Decrease risk of ectopic pregnancy and endometrial cancer	Menstrual irregularity Weight gain Unpredictable return of fertility Increase risk of osteoporosis with long use in high risk clients
Copper intra-utérine device (Cu-IUCD)	0.8	0.6	Last 10 years Immediately reversible No systemic effects	Training needed for insertion Heavy periods Problems with insertion/retrieval
Female sterilization	0.5	0.5	No contraindication Single procedure	Require general anaesthetic Difficult to reverse Post-operative complications Increase risk of ectopic pregnancy
Vasectomy	0.15	0.1	No contraindication Single procedure	Difficult to reverse Post-operative complications
Implant	0.05	0.05	Last 3 years Immediately reversible	Training needed to insert /remove Wound infection/or scarring Can cause irregular bleeding and Progestin side effects

- **Perfect use**: when method used consistently and correctly every time, without any errors
- **Typical use:** when method used inconsistently (e.g missed doses, delayed used , incorrect application)

5. Flow of birth spacing clients

In Birth Spacing clinics quality of services is to be improved by a well-organized flow of clients starting at registration, continuing with counseling and ending with service provision.

At the Primary Health Care institution:

- On all possible contact points between women and health providers, initial counseling/ education is to be provided in (ANC, PNC, Child Health clinics, Diabetic and HTN clinic and other clinics) using the relevant health education materials.
- After initial counseling, client is to be given a leaflet, which contains basic information about the benefits of the different methods provided in MOH. She is to be asked to discuss it with her husband and to come back at her convenience, as soon as possible.
- When a woman does not desire to bring her husband and wishes to use contraceptive, woman's independent decision should be respected.
- When a woman attending healthcare institution and has already made her choice about the method that she wants to use, she should to be send for BS registration.

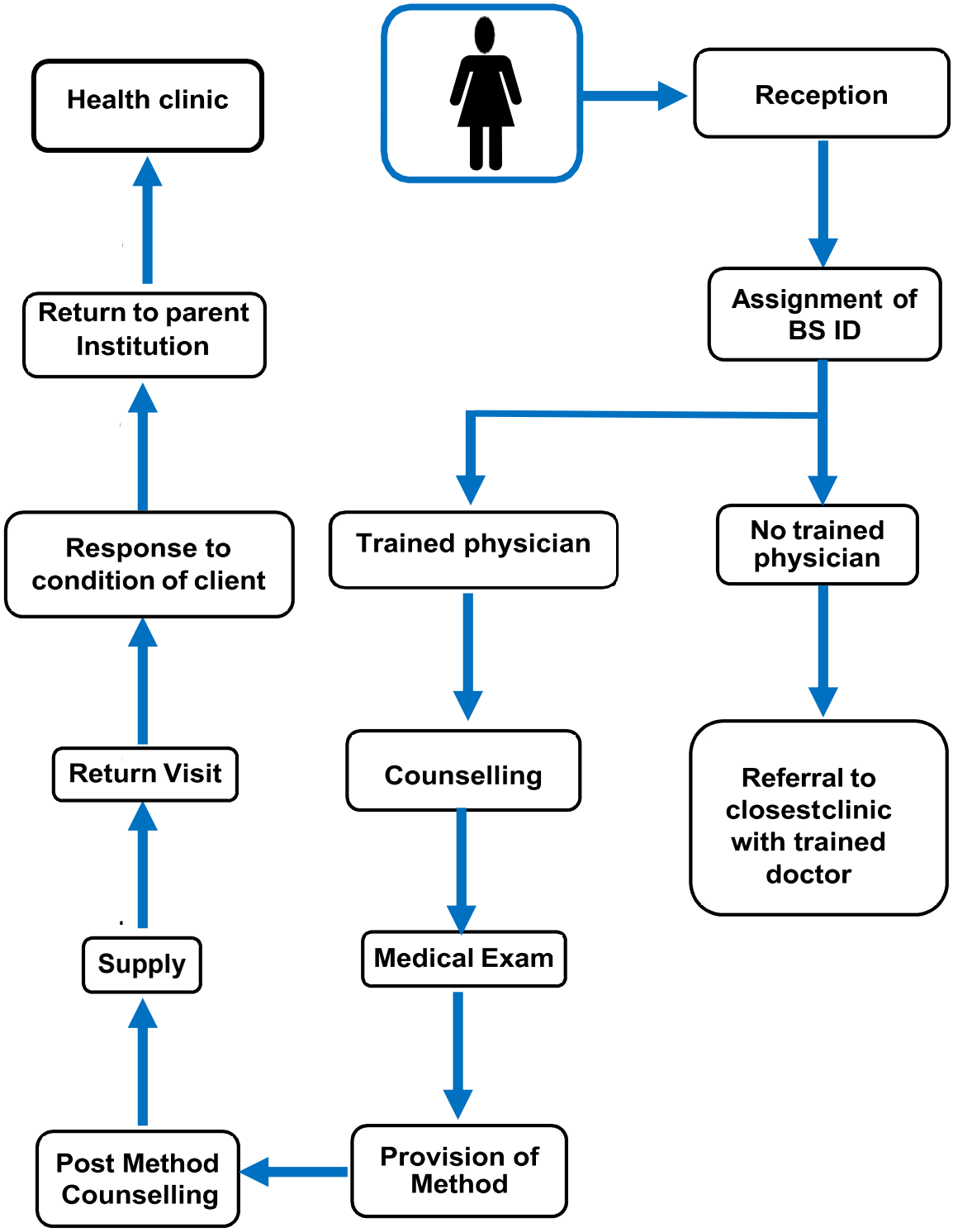
At the birth spacing clinic

- The staff nurse / midwife should fill the part of the B.S. card, the registration number, details of the source of information, birth spacing history (see BS card in the following chapter) and refer the woman to the trained doctor if available in the registering facility, or to the closest health facility where a trained doctor is available, woman carrying her BS card with her.
- The trained nurse/midwife/doctor has to provide method specific counselling to the client and help her to make informed choice.
- After taking a verbal informed consent form the client, the healthcare provider should review and complete the medical history and perform the physical examination (general, abdominal, pelvic) and do necessary laboratory tests.
- If there are no contraindications for the client to use the desired method, the method should be provided by the trained doctor if it is the right time to start.
- The client should be given post method counselling and an appointment for follow-up.
- Follow up visits should be scheduled regularly (Refer to each method section)

Circulation of the clients at the Birth Spacing sites:

- In health facilities, there should be enough space provided for educational sessions on Birth Spacing.
- The flow of clients should be smooth from the education room to the counseling room.
- The pre and post method counseling sessions should take place in privacy.
- The examination also should be done in room, or a separation with full privacy.
- If possible, the necessary laboratory tests and obtaining their results should be done on the same day in the centers and results recorded in the birth spacing card and Al Shifa system.
- Whenever possible, services should be provided on the same day except when there is doubt of pregnancy then the client should be explained about the possibility of pregnancy. The client should be informed and if accepted, be given a temporary method like condom and asked to return on appointment date.
- Returning client, should be served first, and not to be subjected to go through the whole process again.

Algorithm 1: Birth spacing Client's Services Flow



6. Assessment of the client prior to use of birth spacing methods

Before initiating any birth spacing method, a thorough assessment of the client is essential to ensure safety, effectiveness, and suitability.

Table 2: Assessment of client prior to the use of birth spacing methods

History
• **Age, last menstrual period (LMP)** • **Obstetric History:** Number of pregnancies, live births, miscarriages, abortions, current Breast-feeding • **Menstrual History**: Regularity, duration, and menstrual abnormalities • **Contraceptive History**: Previous use of contraceptives, reasons for discontinuation, side effects experienced. • **Gynecological problems**: Past or present PID, recent abortion/ectopic pregnancy, postpartum or post-abortive endometritis, unexplained vaginal bleeding, vaginal discharge, cervical malignancy, trophoblastic neoplasia • **Current/Past Medical history of:** ➢ **Cardiovascular disorders:** (Thromboembolism (Deep vein thrombosis or Pulmonary embolism, Ischemic heart disease, Stroke, Hypertension, Complicated valvular heart disease (Rheumatic heart disease), Known thormbogenic mutation /thrombophilia) ➢ **Breast diseases** (benign or malignant) ➢ **Endocrine disorders:** Diabetes Mellitus (duration and renal or vascular complications), Gestational Diabetes Mellitus (GDM), Hyperlipidemia ➢ **Hematological disorders:** Sickle cell disease, Iron deficiency anemia ➢ **Gastroenterological conditions:** Jaundice, Serious Liver disorders/active hepatitis, Gall bladder disease, Primary liver cancer ➢ **Neurological disorders:** Headache (migraine and non-migraine), Epilepsy ➢ **Autoimmune diseases.** ➢ **Infectious diseases:** Known HIV/STI. risk of STIs and multiple partners, risky situations include: - Husband has STI symptoms such as pus coming from penis, pain or burning during urination, or an open sore in the genital area - She or her husband was diagnosed with an STI recently - She has had more than one sexual partner recently - Her husband has had other sexual partners recently • **Current Medications:** Drugs such as anti-epileptic medications or antibiotics. • **Surgical History:** Any previous pelvic surgery or uterine abnormalities (important for IUD use).H/o bariatric surgery (affects absorption of oral contraceptives). • **Smoking** (duration and number of cigarettes smoked), obesity, or other risk factors • **Client's Preferences:** Desire for short-term, long-term, or permanent contraception

General examination	Systemic examination	Investigations (should be done in first visit, annual visit and as indicated)
• Pulse • Blood pressure • Pallor • Jaundice • BMI • Calf tenderness • Signs of cardiovascular failure (raised JVP, Pedal oedema)	• Breast examination • Cardio-vascular system • Respiratory • Abdomen • Pelvic examination (for IUCD and if indicated): check for vaginal/cervical ulcer, pain, discharge, uterus position, size and other abnormality	• Urine pregnancy test, if pregnancy suspected (see criteria for excluding pregnancy) • Hemoglobin, if anemic • Pap smear, if indicated • Vaginal swab for culture (if indicated)

7. Exclude pregnancy

Urine pregnancy test shouldn't be done in every visit to exclude pregnancy if the woman comes to appointment with her normal period, or if she is certainly sure is not pregnant (check Table 3). However, urine pregnancy test must be done if the woman reported amenorrhea with injections use or after stopping or incorrect use of the methods, missing pills or for any unexplained amenorrhea. The following criteria can also be used to exclude pregnancy:

Table 3: Criteria for Reasonable Excluding Pregnancy

Healthcare providers can be reasonably certain that a woman is not currently pregnant if any one or more of the following criteria are met and there are no symptoms or signs of pregnancy:	
1	She has not had intercourse since the start of her last normal (natural) menstrual period, since childbirth, abortion, miscarriage, ectopic pregnancy or uterine evacuation for gestational trophoblastic disease
2	She has been correctly and consistently using a reliable method of contraception.
3	She is within the first 5 days of the onset of a normal (natural) menstrual period.
4	She is less than 21 days postpartum (non-breastfeeding women).
5	She is fully breastfeeding, amenorrhoeic AND less than 6 months postpartum.
6	She is within the first 5 days after abortion, miscarriage, ectopic pregnancy or uterine evacuation for gestational trophoblastic disease.
7	She has not had intercourse for >21 days AND has a negative high-sensitivity urine pregnancy test (able to detect hCG levels around 20 mIU/ml)

8. Selection of the contraceptives by using WHO Medical Eligibility Criteria (WHO MEC)

Step 1:

- Determine the most suitable contraceptive method for the client based on risks and benefits as defined by WHO –Medical Eligibility Criteria category (WHO MEC), which can only be used for contraceptive purposes. Contraceptive wheel can be used to guide on the selection of the safe and effective contraceptive method for the women.
- For each medical condition or medically relevant characteristic, contraceptive methods are placed into one of four numbered categories. The definitions of the categories are given in Table 4.

Table 4: Definition of WHO MEC categories

WHO MEC	Definition of the category	What is mean in practice
Category 1	A condition for which there is no restriction for the use of the method	Use method in any circumstances
Category 2	A condition where the advantages of using the method generally outweigh the theoretical or proven risk.	Generally, use the method But higher level judgment and more careful follow up required
Category 3	A condition where the theoretical or proven risk usually outweigh the advantages of using the method, use of the method is not usually recommended unless other more appropriate methods are not available or not acceptable	Probably don't use (needs expert judgment/specialist referral)
Category 4	A condition which represents unacceptable health risk if the method is used.	Do not use

It is important to note that the WHO MEC categories:

- Cannot simply be added together to indicate the safety of using a method. For example, if a woman has two conditions that are each MEC 2 for use of COC, these should not be added to make a MEC 4. However, if multiple MEC 2 conditions are present that all relate to the same risk, clinical judgement must be used to decide whether the risks of using the method may outweigh the

benefits. For example, consider a 32-year-old woman wishing to use COC who has a body mass index (BMI) of 30 kg/m2 (MEC 2), is a current smoker (MEC 2), has a history of superficial venous thrombosis (MEC 2), and has a first-degree relative who had a venous thromboembolic event at age 50 years (MEC 2), all are potential risk factors for venous thromboembolism (VTE). She might be better advised to consider a different method of contraception that does not increase her risk of VTE.

- When an individual has multiple conditions, all scoring MEC 3 for a method, use of this method may pose an unacceptable risk; clinical judgement should be used in each individual case.

Step 2: Determine Initiation /Continuation of a Method for women with a medical condition.
The MEC also set criteria for Initiation (I) and Continuation (C) of contraceptive methods for women with medical conditions (Table 4).

Table 5: Initiation and continuation of a method by women with a medical condition

Initiation (I)	Starting a method by a woman with a specific medical condition.
Continuation (C)	Continuing with the method already being used by a woman who develops a new medical condition.

The duration of use of a method of contraception prior to the new onset of a medical condition may influence decisions regarding continued use. For example, the initiation of a Progestin-only pill (POP) is not restricted in a woman with stroke (cerebrovascular accident) as the advantages of using the method generally outweigh the theoretical or proven risks (MEC 2). However, if a woman has a stroke (cerebrovascular accident) while using a POP (MEC 3), the continuation of the method will require expert clinical judgement from gynecologist in secondary health care because use of that method is not usually recommended unless other, more appropriate methods are not available or acceptable.

Medical Eligibility Criteria (MEC) assessment should be done during first visit and at every follow-up visits, and should be documented in both the birth spacing card and Al Shifa system.

The following Table 6 provide a guidance that can be used prior selection of contraceptive method.

Table 6: Summary Chart of Medical Eligibility Criteria for Contraceptive Use

Condition	Sub-Condition	Cu-IUD		Implant		DMPA		POP		COC	
		I	C	I	C	I	C	I	C	I	C
Age		Menarche to <20 yrs:2 ≤20 yrs:1		Menarche to < 18 yrs:1 18-45 yrs:1 >45 yrs:1		Menarche to < 18 yrs:2 18-45 yrs:1 >45 yrs:2		Menarche to < 18 yrs:1 18-45 yrs:1 >45 yrs:1		Menarche to < 40 yrs:1 ≤45 yrs: 2	
Anatomical abnormalities	a) Distort uterine cavity	4									
	b) Not distort uterine cavity	2									
Anemias	a) Thalassemia	2		1		1		1		1	
	b) Sickle cell disease	2		1		1		1		2	
	c) Iron-deficiency anemia	2		1		1		1		1	
Benign ovarian tumors	(including cysts)	1		1		1		1		1	
Breast Disease	a) Undiagnosed mass	1		2		2		2		2	
	b) Being breast disease	1		1		1		1		1	
	c) Family history of cancer	1		1		1		1		1	
	d) Breast cancer										
	i) Current	1		4		4		4		4	
	ii) Past and no evidence of current disease for 5 years	1		3		3		3		3	
Breastfeeding	a) < 6 weeks postpartum			2		3		2		4	
	b) ≥ 6 weeks to < 6 months (primarily breast feeding)			1		1		1		3	
	c) ≥6 months postpartum			1		1		1		2	
Cervical cancer	Waiting treatment	4	2	2		2		1		2	
Cervical ectropion		1		1		1		1		1	
Cervical intraepithelial neoplasia		1		2		2		1		2	
Cirrhosis	a) Mild (compensated)	1		1		1		1		1	
	b) Server (decompensated)	1		3		3		3		4	
Cystic fibrosis		1		1		2		1		1	
Deep venous thrombosis (DVT)/Pulmonary embolism (EP)	a) History of DVT/PE	1		3		3		3		4	
	b) Acute DVT/PE	1		3		3		3		4	
	c) DVT/PE and established anticoagulant therapy	1		2		2		2		4	
	d) Family history (first-degree relatives)	1		1		1		1		2	
	e) Major surgery										
	i) With prolonged immobilization	1		2		2		2		4	
	ii) With out prolonged immobilization	1		1		1		1		2	
	f) Minor surgery without immobilization	1		1		1		1		1	
Depressive disorders		1		1		1		1		1	

Condition	Sub-Condition	Cu-IUD		Implant		DMPA		POP		COC	
		I	C	I	C	I	C	I	C	I	C
Diabetes	a) History of gestational disease	1		1		1		1		1	
	b) Non-vascular disease										
	i) No-insulin dependent	1		2		2		2		2	
	ii) Insulin dependent	1		2		2		2		2	
	c) Nephropathy/ retinopathy/ neuropathy	1		2		3		2		3/4*	
	d) Other vascular disease or diabetes of >20 years' duration'	1		2		3		2		3/4*	
Dysmenorrhea	Severe	2		1		1		1		1	
Endometrial cancer		4	2	1		1		1		1	
Endometriosis		2		1		1		1		1	
Epilepsy	If not on treatment	1		1		1		1		1	
	If on treatment	(see Drug Interactions)									
Gallbladder disease	a) Symptomatic										
	i) Treated by cholecystectomy	1		2		2		2		2	
	ii) Medically treated	1		2		2		2		3	
	iii) Current	1		2		2		2		3	
	b) Asymptomatic	1		2		2		2		2	
Gestational Trophoblastic Disease (GTD)	a) Decreasing or undetectable β-HCG	3		1		1		1		1	
	b) Persistently elevated levels or malignancy disease.	4		1		1		1		1	
Headaches	a) Non- migraine(mild or severe)	1		1		1		1		1	2
	b) Migraine	1		1		1		1		2	
	i) Without aura (includes menstrual migraine)	1		2	2	2	2	1	2	3	4
	ii) With aura	1		2	3	2	3	2	3	4	4
History of bariatric surgery	a) Restrictive procedures	1		1		1		1		1	
	b) Malabsorptive procedures	1		1		1		3		3	
History of cholestasis	a) Pregnancy related	1		1		1		1		2	
	b) Past COC related	1		2		2		2		3	
History high blood Pressure during pregnancy)	(where current blood pressure is measurable and normal)	1		1		1		1		2	
History of pelvic surgery		1		1		1		1		1	
HIV/AIDS	a) High risk HIV	2	2	1		1		1		1	
	b) Asymptomatic or mild HIV clinical disease(who stage 1 or 2)	2	2	If on treatment , see Drug interactions							
	c) Severe or advanced HIV clinical disease (who stage 3 or 4)	3	2	If on treatment , see Drug interactions							

Key:

1 No restriction (method can be used)	3 Theoretical or proven risks usually outweigh the advantages
2 Advantages generally outweigh theoretical or proven risks	4 Unacceptable health risk (method not to be used)

Abbreviations: ARV antiretroviral, C continuation of contraceptive method, COC combined oral contraceptive C IUD copper-containing intrauterine device, DMPA depot medroxyprogesterone acetate, I Initiation of contraceptive method, NA not applicable, POP progestin-only pill, SSR selective serotonin reuptake inhibitor.

Adopted from summery chart US – Medical Eligibility Criteria for contraceptive use , CDC (based on WHO –Medical Eligibility Criteria) .Most contraceptive methods do not protect against sexually transmitted diseases (STDs). Consistent and correct use of the male latex condom reduces the risk of STDs and HIV.

Summary Chart of Medical Eligibility Criteria for Contraceptive Use- contd.

Condition	Sub-Condition	Cu-IUD		Implant		DMPA		POP		COC	
		I	C	I	C	I	C	I	C	I	C
Hypertension	a) History of HTN where BP cannot be evaluated (including HTN during pregnancy)	1		2		2		2		3	
	b) Adequately controlled hypertension	1		1		2		1		3	
	c) Elevated blood pressure levels (properly taken measurements)										
	i) Systolic 140-159 or diastolic 90-99	1		1		2		1		3	
	ii) Systolic ≥160 or diastolic 100	1		2		3		2		4	
	d) Vascular disease	1		2		3		2		4	
Inflammatory bowel disease	(Ulcerative colitis, Crohn's disease)	1		1		2		2		2/3	
Ischemic heart disease	Current and history of IHD	1		2	3	3		2	3	4	
Known thrombogenic mutations		1		2		2		2		4	
Liver tumors	a) Benign										
	i) Focal nodular hyperplasia	1		2		2		2		2	
	ii) Hepatocellular adenoma	1		3		3		3		4	
	b) Malignant (hepatoma)	1		3		3		3		4	
Malaria		1		1		1		1		1	
Multiple risk factors for atherosclerotic cardiovascular disease	(e.g, older age, smoking, diabetes, hypertension, low HDL, high LDL, or high triglyceride levels)	1		2		3		2		3/4	
Multiple sclerosis	a) With prolonged immobility	1		1		2		1		3	
	b) Without prolonged immobility	1		1		2		1		1	
Obesity	a)Body mass index (BMI) ≥30 kg/m^2	1		1		1		1		2	
	b) Menarche to <18 years and BMI ≥ 30 kg/m^2	1		1		2		1		2	
Ovarian cancer		3	2	1		1		1		1	
Parity	a) Nulliparous	2		1		1		1		1	
	b) Parous	1		1		1		1		1	
Past ectopic pregnancy		1		1		1		2		1	
Pelvic inflammatory disease	a) Past PID (assuming no current risk factors for STI)										
	i) With subsequent pregnancy	1	1	1		1		1		1	
	ii) Without subsequent pregnancy	2	2	1		1		1		1	
	b) Current	4	2	1		1		1		1	
Post- abortion	a) First trimester	1		1		1		1		1	
	b) Second trimester	2		1		1		1		1	
	c) Immediate post- septic abortion	4		1		1		1		1	
Postpartum (non breastfeeding women)	a) <21 days										
	i) Without risk factors for VTE			1		1		1		3	
	ii) With other risk factors for VTE			1		1		1		4	
	b) 21 days to 42 days										
	i) Without other risk factors for VTE			1		1		1		2	
	ii) With other risk factors for VTE			1		1		1		3	
	c) >42 days			1		1		1		1	
Postpartum (breastfeeding or non-breastfeeding women, including cesarean section)	a) <48 hours after delivery of the placenta	1									
	b) ≥48 hours to < 4 weeks	3									
	c)) ≥4 weeks	1									
	d) Postpartum sepsis	4									

Condition	Sub-Condition	Cu-IUD		Implant		DMPA		POP		COC	
		I	C	I	C	I	C	I	C	I	C
Pregnancy		NA		NA		NA		NA		NA	
Rheumatoid Arthritis	a) On immunosuppressive therapy	2	1	2/3		1		1		2	
	b) Not on immunosuppressive therapy	1		2		1		1		2	
Schistosomiasis	a) Uncomplicated	1		1		1		1		1	
	b) Fibrosis of the liver	1		1		1		1		1	
Sexually transmitted diseases (STI s)	a) Current purulent cervicitis or chlamydial infection or gonorrhea	4	2	1		1		1		1	
	b) Other STIs (excluding HIV and hepatitis)	2	2	1		1		1		1	
	c) Vaginitis (including trichomonas vaginalis and bacterial vaginosis)	2	2	1		1		1		1	
	d) Increased risk of STI s	2/3	2	1		1		1		1	
Smoking	a) Age <35	1		1		1		1		2	
	b)Age ≥35, <15 cigarettes/day	1		1		1		1		3	
	c) Age ≥35, ≥15 cigarettes/day	1		1		1		1		4	
Solid organ transplantation	a) Complicated	3	2	2		2		2		4	
	b) Un- Complicated	2		2		2		2		2	
Stroke	History of cerebrovascular accident	1		2	3	3		2	3	4	
Superficial venous	a) Varicose veins	1		1		1		1		1	
	b)Superficial venous thrombosis (acute or history)	1		1		1		1		2	
Systemic lupus Erythematosus	a) Positive (or unknown) antiphospholipid antibodies	1	1	3		3	3	3		4	
	b) Severe thrombocytopenia	3	2	2		3	2	2		2	
	c) Immunosuppressive therapy	2	1	2		2	2	2		2	
	d) None of the above	1	1	2		2	2	2		2	
Thyroid disorders	Simple goiter/hyperthyroid/hypothyroid	1		1		1		1		1	
Tuberculosis (see also Drug Interactions)	a)Non-pelvic	1	1	1		1		1		1	
	b) Pelvic	4	3	1		1		1		1	
Unexplained vaginal Bleeding	(suspicious for serious condition) before evaluation	4	2	3		3		2		2	
Uterine fibroids	a) Without distortion of the cavity	1		1		1		1		1	
	b) With distortion of the cavity	4		1		1		1		1	
Valvular heart disease	a) Uncomplicated	1		1		1		1		2	
	b) Complicated (pulmonary hypertension , risk of AF , h/o subacute bacterial endocarditis)	2		1		1		1		4	
Vaginal bleeding patterns	a) Irregular pattern without heavy bleeding	1		2		2		2		1	
	b) Heavy or prolonged bleeding	2		2		2		2		1	
Viral hepatitis	a) Acute or flare	1		1		1		1		3/4	2
	b) Carrier/Chronic	1		1		1		1		1	1
Drug interactions											
Antiretrovirals used for prevention (PrEP) or treatment of HIV Anticonvulsant therapy	Fosamprenavir (FPV) All other ARVS are 1 or 2 for all methods.	1/2	2	2		2		2		3	
Anticonvulsant therapy	a) Certain anticonvulsants (phenytoin, carbamazepine, barbiturates, primidone, topiramate, oxcarbazepine)	1		2		1		3		3	
	b) Lamotrigine	1		1		1		1		3	
Antimicrobial therapy	a) Broad -spectrum antibiotics	1		1		1		1		1	
	b) Antifungals	1		1		1		1		1	
	c) Antiparasitics	1		1		1		1		1	
	d) Rifampin or rifabutin therapy	1		2		1		3		3	
SSRIs		1		1		1		1		1	

9. Follow up visits

At each follow up visits, check the followings:

- Ask how the client is doing with the method and whether she is satisfied. Ask if she has any questions or anything to discuss.
- Ask about the correct use of the method.
- Ask if there are any side effects or complications related to the contraceptive methods
- Ask especially if she is concerned about bleeding changes. Give her any information or help that she needs (see Managing side effects and complications in each section).
- Ask if she often has problems remembering to take a pill every day. If so, discuss ways to remember, making up for missed pills or choosing another method.
- Plan her next resupply visit before she will need more pills.
- Ask a long-term client if she has had any new health problems since her last visit. Address problems as appropriate.
- Ask a long-term client about major life changes that may affect her needs— particularly plans for having children
- Check weight, blood pressure and urine pregnancy test (if needed) in every follow up visit.
- Counselling and recommendations should be given by the treating doctor in the clinic.
- Schedules a follow up visit for the woman
- Women should be instructed to seek medical care when she develops any side effects/complications related to the selected methods.
- For non-complaint women with no complications, exclude pregnancy, revise the selection of method provide counselling, give an appointment after one month.

10. Management of side effects and complications

- See related section on management of side effects/complications under each method.

2.3.2 Counselling

Contraceptive counseling is a two ways process of communication by which one person helps another to identify her/ his reproductive health needs and to make the most appropriate decision about the method to select.

Objectives:

- Decide whether or not they need and want to use a method of contraception.
- Make an informed free choice for a contraceptive method.
- Learn about their method of choice.
- Use the method of their choice properly.
- Support client in overcoming anxieties and make adequate decisions if problems occur.

Factors influencing counselling:

- Age.
- Culture.
    - Ideal family size.
    - Who makes reproductive decisions?
    - Age of marriage.
- Educational attainment.
- Emotional status.
- Readiness for behavioral changes.

Counselling Environment:

- Wherever counseling takes place it must be held privately.
- Room arrangement should facilitate communication between client and counselor.
- Use of visual aids to facilitate discussions such as flip charts, booklets, anatomical and pelvic models

Counsellor approach and attitude:

Who should do counseling?

- Every trained health worker in health institutions of all levels should be able to give accurate information.
- The nurses/midwifes will provide initial counseling.
- A trained doctor or nurse/ midwife will provide method specific counseling

A good Counselor should have:

- Understanding and respect for client's rights.
- Sensitivity that earns the trust of clients.
- Understanding of the cultural and psychological factors that affect a woman's (couple) decision.
- A non-judgmental approach, treating the client with respect.
- Good understanding of all methods.
- Ability to present information in a non-technical unbiased and client sensitive manner.
- A way to encourage clients to ask questions.
- Ability to recognize when referral is needed.
- Appreciation of non-verbal communication (body language).

Counselling process:

- Birth spacing counseling is a function that should be integrated in all phases of the interaction between the client and the health care provider.
- Information should be given to aid client's choice, not to force, press or induce a person to use a particular method, but in situations when client is planning to space for longer times, use of long-acting methods like injectable, implant or IUCDs should be encouraged.
- Male counselors should be trained, and arrangements made for counseling the male partners.
- Female doctors can also take active role in counseling male partners as and when needed.

Types of Counselling: There are 2 Phases in Counseling:

1. **Initial Counselling**

- It can be done by health educator or Arabic speaking nursing staff.
- Simple mnemonic device may be useful in remembering the steps:

“GATHER"

- Greet each client warmly.
- Ask the client about herself and why she has come.
- Tell the client about the methods available in the Ministry of Health, then tell her more about the method she is interested in.
- Help the client choose the method that is best for her.
- Explain how to use the method.
- Return for follow up.

2. **Method- Specific Counselling** (By nurses & midwives or by doctor)

- Pre-provision method counseling
- Post-provision method counseling
- Follow up counseling
- Deal with rumors and facts

Informed Consent

- Giving complete information in a simple way
- Use mnemonic device **"BRAIDED"**
  - Benefits of the method
  - Risks of the method
  - Alternatives to the method
  - Inquiries about the method are the Client's right and responsibility.
  - Decision to stop belongs to the client
  - Explanation of the method
  - Documentation of consent for surgical methods

2.3.3 Health Education/ Community Awareness on Birth Spacing

- Educating community on the benefits of spacing and advantages of modern contraceptive use is an important component of birth spacing service provision and is carried out at all contact opportunities with women of reproductive age by all category of health care providers at all levels of health care system, and during routine postnatal and EPI visits.
- Women should be offered proper information and support to enable them to make informed decisions regarding their birth spacing needs. Women's choices should be recognized as an integral part in the decision-making process. They must be offered opportunities to know more about birth spacing methods and to be given written information (leaflets) about birth spacing. Now all are available for all women with QR code.

Area in the healthcare facilities where education on birth spacing can be delivered

Antenatal		Postnatal		Gynecological		Child health			GP, DM, HTN clinics Chronic disease clinic
Clinic	wards	Clinic	wards	Clinic	wards	Clinic	wards	EPI clinic	Clinics (PHC, SHC)

- Conduct annual national birth spacing campaigns targeting different community groups including women and men in the community and those attending health institutions, schools, colleges and universities and women s associations.
- Mass awareness through social media channels, radio, television, newspapers and magazines, to promote modern contraceptive method use for birth spacing.
- Community health support groups should play an active role in raising awareness of the community. These teams in coordination and support of Wilayate Health committees and NGOs such as Women's Associations.
- If there are no contra- indications for the client to use the desired method, the method should be provided by the trained provider if it is the right time to start.

2.4 Contraceptive methods

2.4.1 Combined Oral Contraceptives (COCs)

What is Combined Oral Contraceptives (COCs)?

Combined oral contraceptive (COCs) COCs are an effective, reversible form of contraception that contains low doses of progestin and estrogen ,which are both found normally in women's body

The content, different types and regimens of COCs is explained in table (7).

Table 7: Content and Types of COCs

Content	Combination of two hormones: a progestin and an estrogen.
Phasic	Monophasic, biphasic or triphasic*
Types	Microgynon 30 (Levonogestrel 150 mcg+ Ethinylestradiol 300 mcg) Or (Norgestrel 300 mcg + Ethinylestradiol 300 mcg)
Pills per pack	**Pack of 21 pills** : all active pills **--** (7-day break between packs)
	Pack of 28 pills : 21 active pills + 7 placebo **---** (no break between packs)
Regimens	**Standard regimen**: (21 active pills + Hormone Free Interval (HFI) 7 days)
	Tailored regimens ** - Shortened hormone-free interval (HFI): 21 active pills + HFI 4 days OR - Extended use (tricycling): 3 Cycles of (21 active pills) + one HFI 4-7 days OR - Continuous use: Continuous use of active pills with (No HFI)

* **Monophasic** pills provide the same amount of estrogen and progestin in every hormonal pill.

Biphasic and triphasic pills change the amount of estrogen and progestin at different points of the pill-taking cycle. For biphasic pills, the first 10 pills have one dosage, and then the next 11 pills have another level of estrogen and progestin. For triphasic pills, the first 7 or so pills have one dosage, the next 7 pills have another dosage, and the last 7 hormonal pills have yet another dosage. All prevent pregnancy in the same way. Differences in side effects, effectiveness, and continuation appear to be slight.

** **Tailored regimens:** can reduce the frequency of withdrawal bleeds and can reduce the withdrawal symptoms associated the Hormone -free interval

The COC provided in MOH (monophasic and estrogen 30-35mcg).

Effectiveness

- **Effectiveness:** 99.7 % with perfect use; 91% with typical use.
- COC is highly user dependent.

Note: The risk of pregnancy is greatest when a woman starts a new pack 3 or more days late, or misses 3 or more pills near the beginning or end of a pack

Factors that can alter effectiveness of COC

- **Incorrect use or Missing pills**
- **Vomiting or severe diarrhea: -** women should be treated as missed pills **see algorithm 2**
- **Drug interactions:** Women using enzyme-inducing drugs (Refer to Appendix 1) should be informed that the contraceptive effectiveness of COC could be reduced during use of the enzyme-inducer and for a further 28 days after stopping.
- **Women taking Lamotrigine** should be advised that COC may interact with lamotrigine; this could result in reduced seizure control or lamotrigine toxicity. The risks of using COC could outweigh the benefits.
- **Malabsorption:** Women who have had **bariatric surgery** should be advised that the effectiveness of COC could be reduced due to malabsorption, thus she should be advised to consider a non-oral method of contraception.
- Most evidence suggests no association between **weight/body mass index (BMI) a**nd combined oral contraceptives (COC) effectiveness

Mechanism of Action

COCPs prevent pregnancy through:

- **Inhibition of ovulation:** Suppression of the hypothalamic-pituitary-ovarian axis.
- **Thickening of cervical mucus:** Reduces sperm penetration.
- **Endometrial changes:** Prevents implantation.

Indications

Primary Indication

- Contraception: Highly effective in preventing pregnancy when used correctly.

Non-Contraceptive Indications

- Menstrual cycle regulation
- Management of menorrhagia (heavy periods)- periods become lighter, shorter and regular
- Reduction of dysmenorrhea (painful periods)
- Improvement of symptoms of premenstrual syndrome (PMS)
- Treatment of acne and hirsutism (in women with PCOS)
- Reduction of endometriosis symptoms (pelvic pain, irregular bleeding)
- Reduction of risk for ovarian and endometrial cancers
- Reduction of risk for Symptomatic pelvic inflammatory disease (PID)
- Management of peri-menopausal symptoms
- Improves Iron deficiency anemia

Advantages

- Highly effective (Effective immediately if started within 5 days of the menstrual cycle)
- Does not interfere with intercourse
- Easily discontinued at any time if the woman wishes to become pregnant
- Usually the return of fertility is immediate

Disadvantages

- User dependent, must be taken every day, forgetfulness and missing pill increase failure rate
- Requires re-supply
- Effectiveness may be lowered with simultaneous use of certain medications (Appendix 1)
- No protection against STI, HIV, HBV
- May cause some side effects

Side effects

- Nausea (upset stomach)- most common
- Changes in bleeding patterns (lighter, irregular, infrequent or no monthly bleeding)
- Mood changes or headaches
- Tender breasts
- Dizziness
- Slight weight gain or loss
- Possible decrease in milk production in breast feeding women

Health Concerns Associated with COC Use

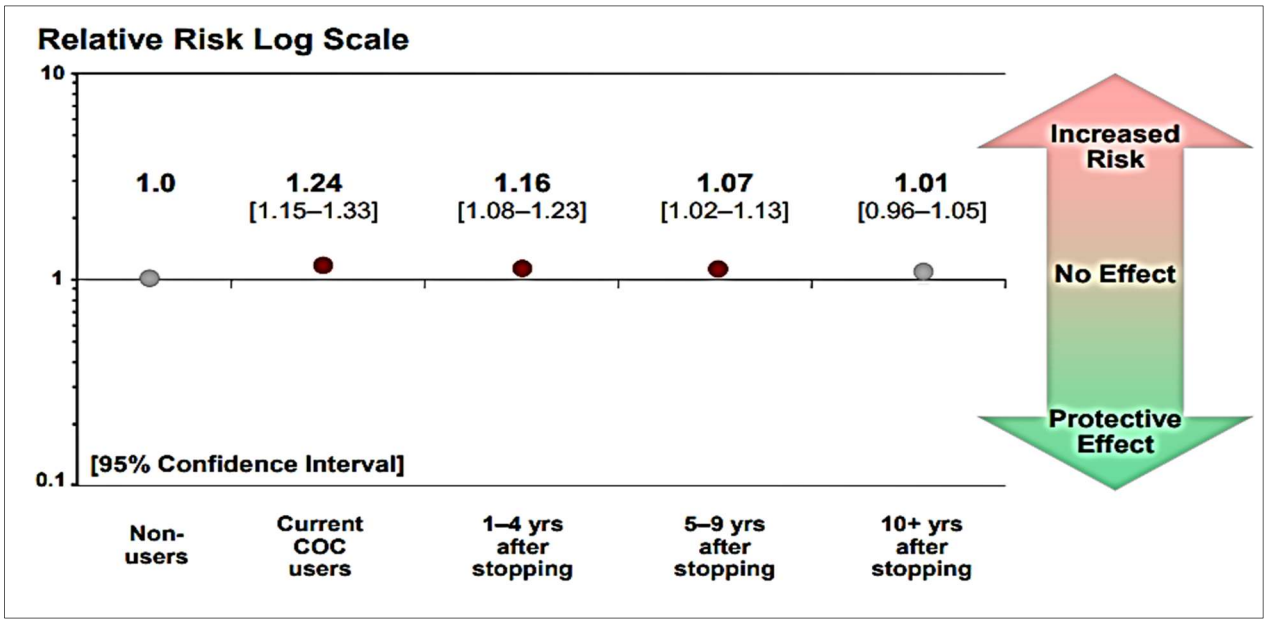
1. **Risk of Venous thromboembolism (VTE) (including deep vein thrombosis and pulmonary embolism)**

- COCs may slightly increase the risk of blood clots: (Stroke, heart attack, deep vein thrombosis (DVT) and pulmonary embolism (PE), which is very rare.
- Risk is concentrated among women who have multiple risk factors, such as: (Hypertension, diabetes, obesity, smoking), So the use of COC among these women should be strongly avoided.
- COC users with migraine with aura are at greater risk of ischemic stroke than COC users without migraine.

2. **Breast cancer**

- COC is associated with a small increased risk of breast cancer which stop within approximately 5 years of stopping, with no evidence of increased risk in later life
- When a current or former COC user is diagnosed with breast cancer, the cancer generally is less advanced than cancers diagnosed in other women.

Figure 1: Relative risk for breast cancer among COC users and non-users



Adapted from Training Resource Package for Family Planning: https://www.fptraining.org/

Breast examination is mandatory in any hormonal methods and to be documented.

3. Cervical cancer

- Current use of COC for more than 5 years is associated with a small increased risk of cervical cancer; risk reduces over time after stopping COC and is no longer increased by about 10 years after stopping.
- COC users should follow the same cervical cancer screening schedule as for other women.

Initiating COCs

A. Pre-Prescription Patient Eligibility Assessment

- **Comprehensive history & Physical examination:** Identify contraindications (e.g., family history of thrombosis, migraines). Refer to (Table 2)
- **Check Medical Eligibility Criteria** (Table 6)
- **Pregnancy exclusion:** Rule out pregnancy through history or testing.

B. When to Start COC

Table 8: Starting Combined Hormonal Contraception based on woman's situation

Women situations	When to start?	Need of backup
Having menstrual cycles	• If within the first 5 days of menstruation: Pills can be started • If > 5 days from the first day of menstruation: make sure she is not pregnant	• No need • Yes, for 7 days
Amenorrhea /no monthly bleeding (not related to childbirth or breastfeeding)	• Any time if reasonably certain she is not pregnant (check table 3) - ask for pregnancy test and provide condoms for 10 days as back up, then repeat pregnancy test after 10 days, if it is negative then start)	• Yes , for 7 days
Post-partum/Breast feeding	• If breast feeding: after 6 months. • If not breast feeding: at 6 weeks post-partum	• Yes, for 7 days • Yes, for 7 days
After miscarriage or abortion	• If within 7 days: - Start immediately • If > 7 days, make sure she is not pregnant	• No need • Yes, for 7 days
Switching from a hormonal or non-hormonal method	• If changing from a POP, she can start COC day following the last pill of the POP packet. • From DMPA to COC: she can start from the due date of the repeat injection. • From IUCD to COC: - If within the first 5 days of menstrual cycle, Cu-IUD can be removed at that time. - If at any other time during the menstrual cycle or if amenorrhoeic, Additional precautions are needed.	• No need • No need • No need • Yes, for 7 days unless COC was started 7 days prior to Cu-IUD removal. Cu-IUD could be left in situ until COC becomes effective.

C. Instructions of Use and Method Specific Counselling

- **Give pills:**
  - Give 2-3 packs as possible including (a spare pack to keep just in case she cannot come back to the clinic for follow-up on time)
- **Explain pill pack:**
  - Show which kind of pack—21 pills or 28 pills.
  - With 28-pill packs, point out that the last 7 pills are a different color and do not contain hormones (some brands may differ)
  - Show how to take the first pill from the pack and then how to follow the directions or arrows on the pack to take the rest of the pills.
- **Give key instruction:**
  - Take one pill each day
  - Discuss ways that may help to remember taking a pill every day such as linking pill-taking to a daily activity—such as going to bed or after meal
  - Taking pills at the same time each day helps to remember them. It also may help to reduce some side effects
  - If she vomits within 2 hours after taking a pill, she should take another pill from her pack as soon as possible, then keep taking pills as usual. If she has vomiting or diarrhea continues for more than 2 days, follow instructions for 3 or more missed pills (Algorithm 2)
- **Explain starting the next pack**
  - **28-pill packs**: When she finishes one pack, she should take the first pill from the next pack on the very next day.
  - **21-pill packs**: After she takes the last pill from one pack, she should wait 7 days- no more- and then take the first pill from the next pack.
  - It is very important to start the taking the pills from the next pack on time. Starting late increase the risk of pregnancy.
- **Provide backup method and explain use**
  - Sometimes she may need to use a backup method, such as when she misses pills or is late taking a pill.
  - Backup methods include abstinence or condoms. Give her 10 condoms as backup method

- **Provide Method Counseling**

  Key Points to Discuss

  - **Effectiveness:** 99.7% with perfect use; 91% with typical use.
  - **Side effects**: Nausea, vomiting, headache, breast tenderness, breakthrough bleeding (most resolve in 2–3 months).
  - **Missed pills:** Importance of adherence and missed pills protocol- algorithm 2
  - **Warning signs**: Teach patients to recognize severe side effects signs of complications (e.g., ACHES: Abdominal pain, Chest pain, Headaches, Eye problems, Severe leg pain).

Follow up and monitoring

First follow up:

- The first follow up visit should be within one month
- Ensure the safety of contraceptive use and adherence.
- At follow-up, medical eligibility should be rechecked, drug history updated, method adherence and method satisfaction assessed.
- Women should be reminded about signs, symptoms, health events and changes in medication that should prompt them to seek medical review.
- BMI and blood pressure should be recorded.
- If the client is not satisfied with the method or has unacceptable side effects, treat her or help her to find another method.
- If satisfied, give her another 3 cycles of pills and ask her to return in three months' during the menstruation time.
- Remind the client about "Method Use" instructions, side effects and warning signs.
- Ask if she often has problems remembering to take a pill every day. If so, discuss ways to remember, make up for missed pills or choose another method.
- Ask a long-term client if she has had any new health problems since her last visit.

Annual check

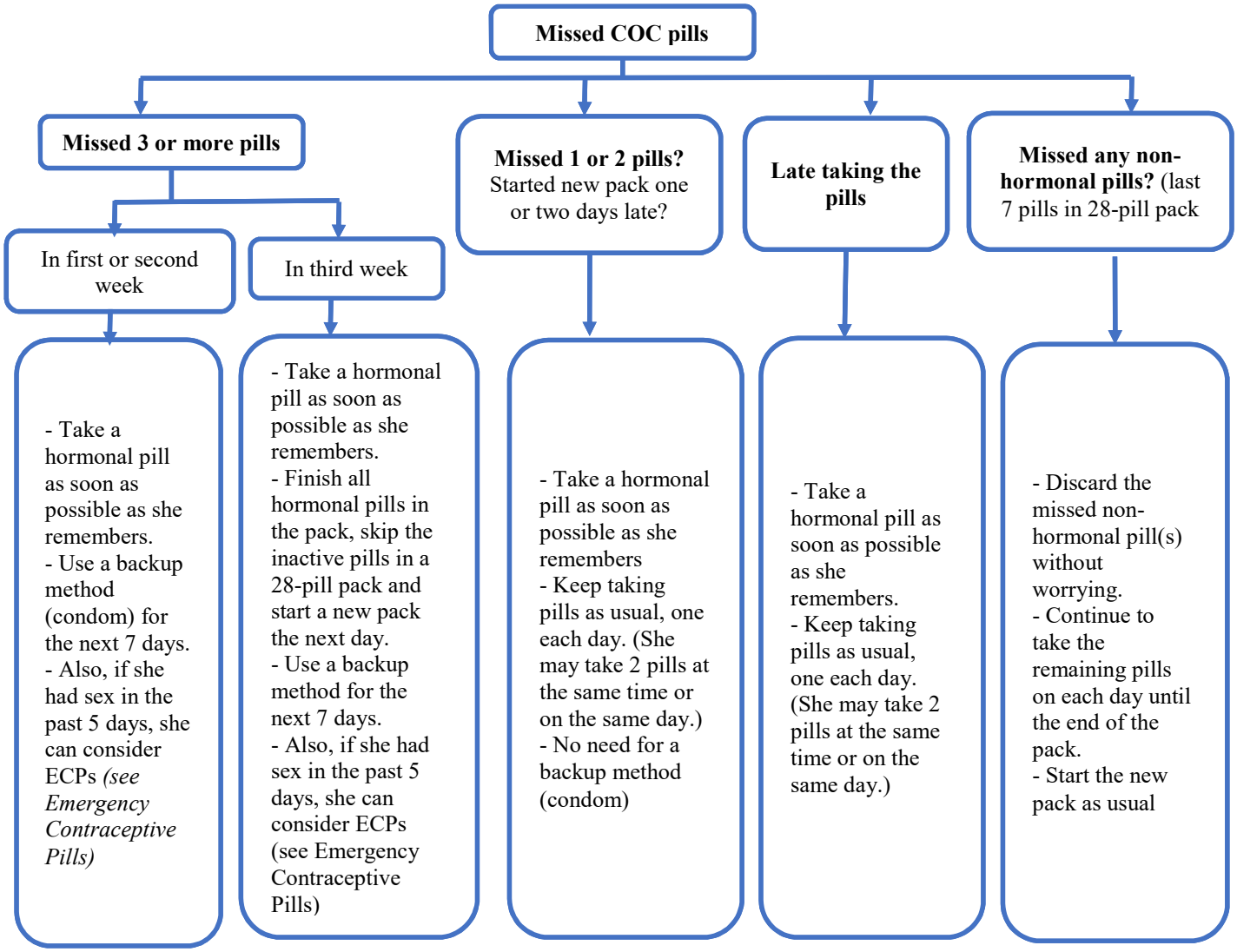
- Review of Medical Eligibility Criteria, drug interactions and compliance.
- Ask /look for side effects or complications, manage as required.
- During every annual follow -up visits: check blood pressure, body weight and record any side effects / complications.
- Do systemic and breast examination.
- Remind the client about the instructions on method use and return.

Management of problems related to COC use or side effects / complications

1. Missing COC pills (With 30–35 µg Estrogen)

The following algorithm describes the management of missing pills

Algorithm 2: Management of Missing COC pills (With 30–35 µg Estrogen)



Note: *For **pills with 20 µg of estrogen or less**, women missing one pill should follow the same guidance as for missing one or two 30–35 µg pills. Women missing 2 or more pills should follow the same guidance as for missing 3 or more 30–35 µg pills.*

2. Management of side effects and complications

The table below describes the management of the side effects/complications and what actions to be taken if the problem persists.

Table 9: Management of side effects and complications

Problem	Action/Management
Headache Ordinary (Non-migranous)	• **Assess:** History of headache before to the contraceptive use, ask if symptoms have worsened after starting the contraceptives, ask about the timing of the symptoms (during the hormone-free week if on COC), check if symptoms are suggestive of migraine headache (with or without aura) or are suggestive of other conditions. • **Check BP.** • **Treat:** - If symptoms are mild with no other suggestive abnormalities, give symptomatic treatment. - If symptoms are suggestive of migraine (with or without aura), help the client to choose another method. • **If the problem persists or is unacceptable to the women** ➢ Change the COC standard regimen (21 active pills + HFI 7 days) to a tailored regimen that can reduce the frequency of headaches associated with the HFI: - Shortened hormone-free interval (HFI): 21 active pills + HFI 4 days OR - Extended use (tricycling): 3 Cycles of (21 active pills) + one HFI 4-7 days OR - Continuous use: Continuous use of active pills with (No HFI) ➢ Switch the COC pill to another method ➢ If the headache is severe and suggestive of another abnormality, refer the patient to the secondary care for the evaluation and management of the headache.

Problem	Action/Management
Nausea and vomiting	• Ask about other symptoms of pregnancy (breast tenderness, missing of periods after normal onset of menses). • If pregnancy is suspected, perform a pregnancy test. • If pregnancy test is positive, stop the contraceptive method and manage according to the Pregnancy & Childbirth Management Guidelines. Reassure her that there are no known risks to a fetus conceived while a woman is taking hormonal contraceptives. • If the pregnancy is not suspected or if the pregnancy test is negative, reassure and continue the method. • Advise to take the pills after food at night, or to take the pills with food or at bedtime • **If the problem persists or is unacceptable to the women** - Same management as for persistent headache
Breast tenderness	• Check breasts for lump, cyst, discharge or galactorrhea (leaking of milk like fluid), breast infection (in breast feeding women). • If localized firm fixed lump not changing during menstruation, refer to surgeon by early appointment. • If pregnancy is suspected, perform pregnancy test. - If pregnant, stop the contraceptive method. - If not pregnant, reassure client that this is a temporary side effect and will improve in a few months and she should continue using the method. • If breast infection: - Treat with antibiotics: Cloxacillin 500 mg orally four times a day for 10 days, OR Erythromycin 250 mg orally three times a day for 10 days, - Follow up after 2weeks to ensure improvement of the infection. • Recommend supportive bra • Suggest pain reliever; hot/cold compress • If breastfeeding, evaluate for engorgement, blocked ducts and treat • **If problem persists or unacceptable to the women** - Same management as for persistent headache - If breast tenderness not improved refer to the secondary care as an emergency (surgeon)

Problem	Action/Management
Irregular bleeding	• Ask her about the possible causes: missed pills, taking pills at different times every day, vomiting or diarrhea, taking anticonvulsants or rifampicin. • Reassure client it is not harmful and often stops after the first several months • Reinforce correct pill taking and review missed pill instructions • For short-term relief, give Mefenemic acid 500 mg TID (after meals) for 5 days, beginning when irregular bleeding starts. • **If the problem persists or is unacceptable to the women** - A clinical history should be taken from women who have problematic bleeding to identify the possibility of an underlying cause - A pregnancy test is indicated for sexually active women using hormonal contraception with problematic bleeding. - Offer another method - Refer to gynecologist for further evaluation and advice patient to continue COC while waiting to be evaluated by gynecologist.
Amenorrhea	• Confirm consistency of pill taking. • Ask if taking drugs which interact (Rifampicin and Antiepileptic). • Rule out pregnancy (Refer to table 3). • Perform pregnancy test. If negative, reassure • **If problem persists or unacceptable to the women, s**ame management as for persistent irregular bleeding
Heavy or prolonged bleeding	• Ask about consistency of method use. • Do pregnancy test. • Do pelvic bimanual examination to rule out any abnormality. • Perform Hb test. • If pregnancy or incomplete abortion is suspected, refer client to secondary care as an emergency for further evaluation and management. • If pregnancy is ruled out: Give short course of NSAIDS 3 times per day (after meals) for 5 days. • Give iron supplement to treat/prevent anemia and encouraged to eat foods rich in iron. • **If problem persists or unacceptable to the women, s**ame management as for persistent irregular bleeding

Problem	Action/Management
Changes in mood or sex drive	• Discuss changes in client's life that could affect her mood or sex drive, including changes with the relationship with her husband. • Support as appropriate. • Refer if concerned about major depression or other serious mood changes.
High Blood pressure	• For a woman with normal BP before initiation of contraceptive hormonal pills, which has appeared after the use of method, allow a 15-minute rest, then check BP again. Advice client to attend for frequent BP check to confirm the diagnosis. • If BP is persistently ≥ 140 systolic and 90 diastolic, stop COC; change to other method
Weight gain or loss /change in appetite	• Advise on healthy diet and importance of regular exercise.

3. Problems that may require stopping COCs or switching to another method

- Unexplained vaginal bleeding (that suggests a medical condition not related to the method)
- Migraines
- Suspected blood clots in deep veins of legs or lungs, liver disease, stroke, or breast cancer
- Circumstances that keep her from walking for one week or more
- Starting treatment with anti- convulsant drugs or rifampicin, rifabutin, or ritonavir
- Suspected pregnancy
- Active liver disease (viral hepatitis acute or flare-up)
- Gallbladder disease
- Hepato-cellular adenomas, malignant tumors (hepatoma)
- Chest pain suggestive of cardiovascular disease (CVD)
- Acute leg pain with tenderness of calf suggestive of acute DVT

Special Populations

Adolescents

- Emphasize benefits for cycle regulation, acne, and menstrual pain.
- Address myths and misconceptions.

Postpartum Women

- Avoid COCs in breastfeeding women within 6 weeks postpartum (risk of VTE).
- Can be started 3 weeks postpartum in non-breastfeeding women if no VTE risk factors.

Perimenopausal Women

- COC can be considered for use by medically eligible women until age 50 as an alternative to HRT for relief of menopausal symptoms and prevention of loss of bone mineral density as well as for contraception.
- After age 50 years, the risks of COC use generally outweigh the contraceptive benefits and women should be advised to switch from COC to a POP, subdermal implant, or a non-hormonal contraceptive method.
- Monitor cardiovascular risks carefully.

Correcting Myths and Misunderstandings about COCs

- Does not build up in woman's body. Women do not need rest from COC's.
- Must be taken every day, whether or not a woman has sex that day.
- Does not make women infertile.
- Does not cause birth defects or multiple births
- Does not change women's sexual behavior.
- Does not collect in the stomach, instead the pill dissolves each day.
- Does not disrupt existing pregnancy

3.4.2 Progestin- only Pills (POPs)

What Are Progestin-Only Pills (POPs)?

POPs are pills that contain low doses of a progestin and do not contain estrogen.

The table below illustrate the content and types of POPs

Table 10: Content and Types of POPs

Content	Only one hormone, progestin. Do NOT contain estrogen.
Types	levonorgestrel (LNG) 30 µg or norethisterone (NET) 350 µg (both provided by MOH) - Have similar effectiveness, safety, characteristics, and eligibility criteria
Pills per pack	28 all active pills OR 35 all active pills (no break between packs)

Table adapted from Training Resource Package for Family Planning: https://www.fptraining.org

Effectiveness

- POPs are user-dependent
- **Effectiveness:** 99.7 % with perfect use; 91% with typical use.
- The percentage of women experiencing an unintended pregnancy within the first year of using POPs **is 0.3% with perfect use**, but with typical use, risk of pregnancy during the first year has been estimated at 9%.
- Effectiveness is higher in breastfeeding women than in non-breast-feeding women.
- For women who have monthly bleeding, risk of pregnancy is greatest if pills are taken late or missed completely

Factors alter the effectiveness of the POP:

- **Timing of pill intake:** Must be taken within the same 3-hour window daily.
- **Vomiting or diarrhea** within 2 hours of taking a pill may reduce absorption
- **Drug interactions** (e.g., with enzyme inducers like rifampin or anticonvulsants). Refer to Appendix 2
- **Weight/BMI:** POP is not affected by body weight or body mass index (BMI). Double-dose POP for contraception is not required for individuals who are overweight or individuals with obesity.
- **Emergency contraceptive pills (Ulipristal acetate UPA-EC):** Individuals should be advised to wait 5 days after taking UPA-EC before starting a POP. They should be made aware that they must use condoms reliably or abstain from sex during the 5 days of waiting and then for 2 days after starting the POP.

Mechanism of Action

- Thickening of the cervical mucus to block sperm penetration
- Suppresses hormones responsible for ovulation
- Changes in the endometrium, making it thin and less receptive to implantation

Health benefits

Non-contraceptive Benefits

- Management of heavy menstrual bleeding and dysmenorrhea in some users.
- Reduce risk of Ectopic pregnancy.
- Reduce symptoms of pelvic inflammatory disease.

Advantages

POP is particularly beneficial for women who:

- **Breastfeed:** POP does not reduce milk supply, making it a safe choice postpartum.
- **Have Estrogen-Related Risks:** For women with a history of deep vein thrombosis, pulmonary embolism, migraines with aura, or cardiovascular risk factors.
- **Are Smokers Over 35**: Safe for women who smoke, regardless of age.
- **Have Certain Chronic Conditions:** E.g., sickle cell anemia, systemic lupus erythematosus

without antiphospholipid antibodies.

- POP is rapidly effective (< 24 hours) if taken within first 5 days of cycle.
- Can be used safely for women of any age between menarche and age 55 years, women who have or have not had children and for women who just had an abortion, miscarriage, or ectopic pregnancy
- Immediate return of fertility.
- Do not interfere with intercourse.
- Can be stopped easily.

Disadvantages

- Forgetfulness increases failure rate.
- For non-breastfeeding women: POPs are not as effective as COC s and other hormonal methods.
- More likely to have menstrual bleeding changes (irregular, amenorrhea, or heavier bleeding)
- Requires resupply.
- Effectiveness may be lowered with simultaneous use of certain medications (Refer to Appendix 2).
- No protection against HIV & STIs.

Side Effects

- Common (more with non- breast-feeding mothers)
  - Irregular bleeding or spotting (bleeding at unexpected times)
  - Heavy or prolonged periods (twice as much as usual or longer than 8 days)
  - Amenorrhea
- Less common:
  - Nausea
  - Headaches
  - Dizziness
  - Breast tenderness
  - Mood changes
  - Abdominal pain

Health concerns with POP use

- **No increase in risk of venous/arterial thrombo-embolism**
- **No increase in risk of breast cancer**: The published evidence is very limited but suggests **no increase in risk** of breast cancer associated with use of POPs
- **Risk of cervical cancer**: WHO MEC recommends **no restriction** on use of POP by individuals with cervical cancer (category 1).
- **Endometrial and ovarian cancer:** The available studies suggest either **no association** between POP use and endometrial cancer /ovarian **or a possible protective** effect.
- **Risk of ectopic pregnancy:** The use of all effective methods of contraception, including POPs, **reduces the risk** of all pregnancies (including ectopic pregnancies) compared to the use of no contraception.
- **Risk of ovarian cysts:** Ovarian cysts observed during use of POP may not be caused by the POP, they are often incidental findings.

Who can use and cannot use POPs?

- Perform a full assessment before the decision of the contraceptive use (Table 2) and refer to Medical Eligibility Criteria (Table 6).

When to Start POP

- Woman can start using POP at any time she wants if she is certain not pregnant. Check (Table 11) for starting POP in special situations.

Table 11: Starting POP according to woman situation

Women situations	When to start?	Need for back up
Having menstrual cycles	• If within the first 5 days of menstruation: Pills can be started • After day 5 of her cycle, rule out pregnancy	• No need • Yes for 2 days
No monthly bleeding (not related to childbirth or breastfeeding)	• She can start POPs at any time, BUT is reasonably certain she is not pregnant. • If the client is not sure of not being pregnant: ask for pregnancy test and provide condoms for 10 days for back up, then repeat pregnancy test after 10 days, if it is negative start POP immediately	• Yes, for 2 days • Yes for 2 days
Post-partum	• Start at 6 weeks (for both breastfeeding and not breastfeeding) after excluding pregnancy.	• Yes for 2 days
After miscarriage or abortion	• If within 7 days: - start immediately • If > 7 days, make sure she is not pregnant	• No need • Yes for 2 days
If she is switching from non- hormonal method	• From non-hormonal method other than IUCD to POP: - If starting within 5 days of start of menstrual cycle, may start immediately - If starting after day 5 of cycle, rule out pregnancy • From IUCD to POP: - Within 5 days after start of menstrual bleeding: Initiate POPs, no backup method - More than 5 days since the start of menstrual bleeding: ▪ Sexually active during this cycle: Recommend client remove IUCD at time of next menses and initiate POPs at that time ▪ Not sexually active in this cycle: Remove IUCD, initiate POPs, and she needs to abstain from having sex or to use a backup method for next two days, or initiate POPs and remove IUCD at next cycle. • Amenorrhic : Initiate as for other amenorrhoeic women	• No need • Yes, for 2 days • No need • Yes, for 2 days
Switching from a hormonal method	• From COC to POP: She can change at any time if she has been using the method consistently and correctly, preferably on the first day of menstruation. • From DMPA to POP: She can start from the due date of the repeat injection. • From Implant to POP: She can start on same day of implant removal.	• No need • No need • No need

Instructions of use and method specific counselling

- **Give pills:**
  - Give one pack during the first visit
  - Give 2-3 packs during subsequent visits as possible including (spare pack to keep just in case she could not come back to the clinic on time)

- **Explain pill pack:**
  - Show which kind of pack—28 pills or 35 pills.
  - Explain that all pills in POP packs are the same color and all are active pills, containing a hormone that prevents pregnancy.
  - Show how to take the first pill from the pack and then how to follow the directions or arrows on the pack to take the rest of the pills.

- **Give key instruction**
  - Take one pill each day—until the pack is empty.
  - Advice woman that she should take a pill at the same time each day. Taking a pill more than 3 hours late makes it less effective.
  - Discuss cues for taking a pill every day. Linking pill-taking to a daily activity—such as going to bed or after meal — may help her remember.

- **Explain starting the next pack**
  - When she finishes one pack, she should take the first pill from the next pack the very next day.
  - It is very important to start the next pack on time.
  - Starting a pack late risks pregnancy.

- **Provide backup method and explain use**
  - Sometimes she may need to use a backup method, such as when she misses pills or is late taking a pill.
  - Backup methods include abstinence or condoms. Give her five condoms as backup method

- Explain that effectiveness decreases when breastfeeding stop
- Without the additional protection of breastfeeding itself, POPs are not as effective as most other hormonal methods.
- When she stops breastfeeding, she can continue taking POPs if she is satisfied with the method, or she is welcome to come back for another method.

- **Explain about side effects**
  - Many women do not have any side effects.
  - Side effects often go away after a few months and are not harmful
  - Bleeding changes are normal and not harmful.
  - Side effects are not signs of illness.
  - Lack of bleeding does not mean pregnancy.
  - Usually become less or stop within the first few months of using POPs.
  - Bleeding changes, however, usually persist.
  - Keep taking POPs, don't skip pills
  - Try taking pills with food or at bedtime to help avoid nausea.
  - The client can come back for help if side effects bother her or if she has other concerns.

Follow up

- For the first cycle ask client to return after 26 days (having taken 26 pills) to the BS clinic.
- At follow-up, medical eligibility should be rechecked, drug history updated, method adherence and method satisfaction assessed, and alternative contraceptive options considered (including LARC). Users should be reminded about health events and changes in medication that should prompt them to seek medical review.
- If the client is not satisfied with the method or has unacceptable side effects, provide counseling on side effects, especially bleeding, telling her that it will disappear with time or help her to find another method.
- If the client is satisfied, give her three cycles of pills, plan for return in three months.
- When she comes back for her second follow up visit and has no complaints or complication, give her three cycles of pills and, continue to re-supply her on each subsequent visit. Send back the client to her parent institution following second follow up visit (if she has been referred from parent institution which does not have a trained doctor) where she will get every 3 months'

supply of pills.

- During every follow up visit, check blood pressure body weight.
- Ask for any side effects/complications, manage as required.
- Remind client about the instructions on method use and return.
- Do pregnancy test if client non-compliant or if pregnancy suspected.

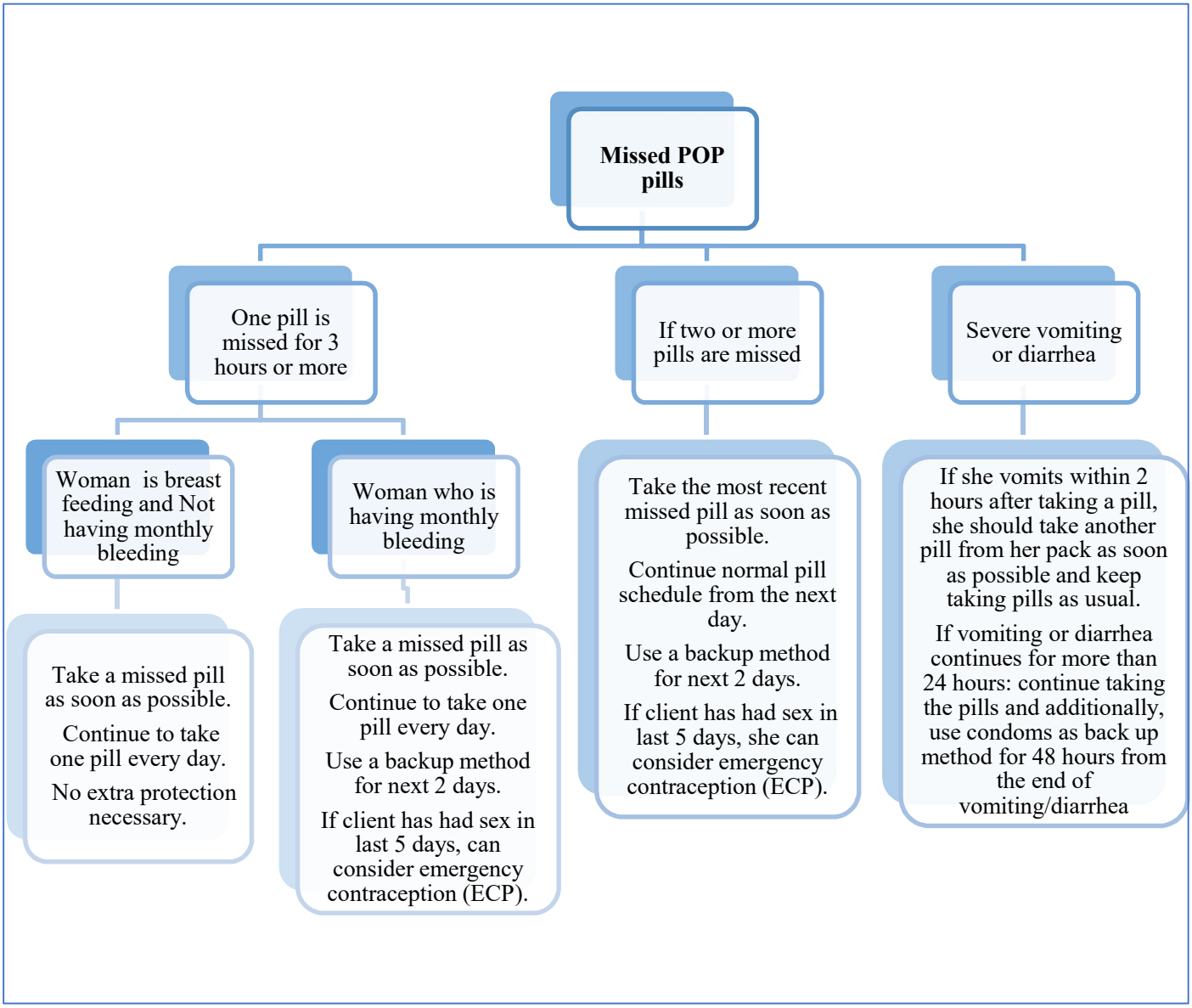
Annual check

- Annual follow up should take place at the parent institutions or referral facility if no trained doctor.
- Ask /look for side effects or complications.
- Do clinical examination as for the first visit before starting the method.
- If client is a good acceptor and has no side effects and complications, she should be followed up and supplied with pills regularly at her parent institution.

Management of problems related to method use and side effects/complication

1. Missed POP pills

Algorithm 3: Management of Missed POP Pills



2. Management of POPs side effects /complications

Table 12 illustrates the management of the common side effects/complications related to POP use

Table 12: Management of POP side effects/complications

Problem	Action/Management
Headache Ordinary (Non-migranous)	• Assess the history of headaches before the contraceptive use (if symptoms have worsened after starting the contraceptives, if symptoms are suggestive of migraine headache (with or without aura), if symptoms are suggestive of other conditions.) • Check BP. • Treat: - If symptoms are mild with no other suggestive abnormalities, give symptomatic treatment. - If symptoms suggest migraine with aura, help the client choose another method. - If symptoms suggest migraine without aura, the client can continue using the method. • **If headache persists and is unacceptable to client**: - Switch to another method - If headache is severe and suggestive of another abnormality, refer the patient to the secondary care for the evaluation and management of the headache
Nausea and vomiting	• Ask about other symptoms of pregnancy (breast tenderness, missing of periods after normal onset of menses). • If pregnancy is suspected, perform a pregnancy test. • If the pregnancy test is positive, stop the contraceptive method. Reassure her that there are no known risks to a fetus conceived while a woman is taking hormonal contraceptives. • If pregnancy is not suspected or if pregnancy test is negative, reassure and continue method. • Advice to take the pills after food at night Take pills with food or at bedtime
Breast tenderness	• Check breasts for lump, cyst, discharge or galactorrhea, breast infection • If localized firm fixed lump not changing during menstruation, refer to surgeon by early appointment. • If pregnancy is suspected, perform pregnancy test. - If pregnant, stop the contraceptive method. - If not pregnant, reassure client that this is a temporary side effect and will improve in few months and she should continue using the method. • If breast infection: - Treat with antibiotics: Cloxacillin 500 mg orally four times a day for 10 days, OR Erythromycin 250 mg orally three times a day for 10 days, - Follow up after 2weeks to assure improvement of the infection. • Recommend supportive bra • Suggest pain reliever; hot/cold compresses • If breastfeeding evaluates for engorgement, blocked ducts and treat • If breast tenderness not improved refer to the secondary care as an emergency (surgeon)
Problem	**Action/Management**

Pain in lower abdomen	• Ask client, if she has symptoms of pregnancy. • Look for signs and symptoms suggestive of ectopic pregnancy • Perform pregnancy test. • If ectopic pregnancy or other serious health condition is suspected, refer patient as an emergency for further evaluation and management. • Abdominal pain may be due to other problems such as enlarged ovarian follicles or cysts. Reassure client and inform this is usually mild and go away on their own. Ask client to come back in 6 weeks. • If severe pain in lower abdomen persists or is extremely severe, refer for care and diagnosis.
Irregular bleeding	• Reassure client: it is not harmful and often stops after first several months. • Reinforce correct pill taking and review missed pill instructions; ask about other drugs that may interact with POPs. • Administer short course of non-steroidal anti-inflammatory drug • **If side effects persist and are unacceptable to client**: - If possible, switch to another method - If side effects start after several months of normal or no monthly bleeding, or if bleeding suggestive of other underlying conditions unrelated to method use, refer to the secondary care (gynecologist) by early appointment for further evaluation and management. - Patient can continue POP while waiting to be evaluated by gynecologist
Amenorrhea	• Confirm consistency of pill taking. • Ask if taking drugs which interact (Rifampicin and Antiepileptic). • Rule out pregnancy (Refer to Table 3). • Perform pregnancy test. If negative, reassure
Heavy or prolonged bleeding	• Ask about consistency of method use. • Do pregnancy test, pelvic bimanual examination to rule out any abnormality. • Perform Hb test, TSH test. • If pregnancy, incomplete abortion is suspected, refer client to the secondary care as an emergency for further evaluation and management. • If pregnancy is ruled out: Reassure her it is generally not harmful and usually becomes less or stops after a few months. • Give short course of non-steroidal anti-inflammatory drugs; or tranexamic acid for 5 days. • Give iron supplement to treat/prevent anemia. • **If side effects persist and are unacceptable to client**: - Same as for irregular periods

Problem	Action/Management
Changes in mood or sex drive	• Discuss changes in client's life that could affect her mood or sex drive, including changes with the relationship with her partner. • Support as appropriate. • Refer if concerned about major depression or other serious mood changes.
Weight gain	• Advice to follow a healthy food and lifestyles • Offer alternate method if still concerned
Unplanned pregnancy during POP use	• Reassure client: no indication that use of POP during pregnancy is associated with fetal abnormality or adverse pregnancy outcomes. • POP use should be stopped
High Blood Pressure	• For women with normal BP before initiation of contraceptive hormonal pills, which has appeared after the use of method, allow 15 minutes' rest then check BP again. Advice client to attend for frequent BP check to confirm the diagnosis. • If BP is 140-159 systolic and 90-99 diastolic, treat hypertension. Continue method if BP is well controlled on treatment, woman is being monitored and there are no additional risk factors for arterial cardiovascular disease (older age, obesity, smoking, diabetes mellitus, hyper-lipidemia past or current ischemic heart disease). • If BP >160 systolic and >100 diastolic, treat hypertension; change if willing to non-hormonal method. If wishes to continue using POP allow her, but keep close watch on the BP and compliance with treatment of hypertension.
Excessive hair growth or hair loss	• Sometimes the pre-existing condition may worsen, usually not so severe to require method stopping. It usually they improve over time, unless client is dissatisfied and requests for stopping the method after counseling.

3. Conditions may require stopping POPs or switching to another method

- Unexplained vaginal bleeding
- Migraines
- Heart disease due to blocked or narrowed arteries or stroke
- Suspected blood clots in deep veins of legs or lungs, liver disease, or breast cancer
- Starting treatment with anti- convulsions or rifampicin.
- Suspected pregnancy
- Hepato-cellular adenomas, malignant tumors (hepatoma)
- Acute leg pain with tenderness of calf suggestive of acute DVT

Special Considerations

- **Breastfeeding Women**: POP is preferred over COCs as it does not affect lactation.
- **Adolescents:** Safe and effective.
- **Women with Obesity:** Efficacy remains high, assess for other risk factors and MEC.
- **Perimenopause / menopause:** POP can be used for contraception by medically eligible individuals until age 55 years. There is no maximum length of time for which POP can be used by medically eligible individuals.

Correcting rumors and misconceptions about POPs:

- Must be taken every day, same time, whether or not a woman has sex that day.
- Do not cause a breastfeeding woman's milk to dry up
- No effect on quality and quantity of breast milk for lactating mothers
- Do not build up in woman's body. Women do not need rest from POP's.
- Do not make women infertile and return of fertility is immediate, some women may have delay in return of monthly bleeding.
- Breast feeding women on POP and not getting periods does not necessarily mean that she is pregnant.
- Do not disrupt existing pregnancies and do not cause birth defects or multiple births.
- Do not change women's sexual behavior
- Do not collect in the stomach, instead the pill dissolves each day.
- Do not increase the risk of ectopic pregnancy.

2.4.3 Progestin –Only Injectable

What Is Progestin-Only injectable?

- Progestin-only injectable, such as Depot Medroxy Progestin Acetate (DMPA) are effective, long-acting reversible contraceptives (LARCs) that provide effective pregnancy prevention. They are highly suitable for women who cannot use estrogen-containing methods. Each vial of 1 ml contains (Depot Medroxy Progestin Acetate150 mg/ml.)
- It is given every 3 months (13 weeks).

Effectiveness on preventing pregnancy

- The percentage of women experiencing an unintended pregnancy within the first year of using the Progestin-only injectable **is 0.2% with perfect use** (used consistently and correctly) but **6% with typical use** (includes incorrect/inconsistent use).
- The efficacy of DMPA contraception is not reduced with concurrent use of enzyme inducing drugs.

Mechanism of Action

- Inhibits ovulation.
- Thickens cervical mucus, preventing sperm penetration.
- Thins the endometrium, reducing the likelihood of implantation.

Health Benefits

- DMPA is a contraceptive option for women with **sickle cell disease** and may reduce the severity of sickle crisis pain.
- Can be used as a treatment for **heavy menstrual bleeding** as amenorrhea or reduced bleeding is common in Progestin-only injectable users and may benefit women with menstrual problems (heavy bleeding).
- It helps to **improve dysmenorrhea and the symptoms of endometriosis** (pelvic pain, irregular bleeding)
- Helps **protect against endometrial and ovarian cancer**s, and **uterine fibroids**
- May help protect against **symptomatic pelvic inflammatory disease**, and **iron-deficiency anemia**

Advantages

- Long-acting and convenient: Protection for 3 months with a single injection.
- No daily pill taking, so it is good option for women who are unreliable pill takers, including mentally retarded women and those with psychosis or who cannot remember to take pills.
- Suitable for breastfeeding women: Does not affect milk production.
- Do not contain estrogen: Ideal for women with contraindications to estrogen-containing contraceptives.
- Reduced menstrual problems: Can decrease heavy bleeding and menstrual pain.
- Can be used safely for women who have just had an abortion, miscarriage, or ectopic pregnancy
- Good choice for women who has concern about the privacy.

Disadvantages

- Must return to the clinic for injection
- Cannot be discontinued before the time of next injection.
- Delay in the return of fertility after discontinuing the method (from 6 months to 1 year)
- No protection against HIV & STIs.

Side Effects

- Altered bleeding patterns (amenorrhea, infrequent bleeding, spotting, prolonged bleeding)
- Headaches, dizziness, abdominal bloating and discomfort
- Weight gain is common (about 1–2 kg per year), particularly in women under 18 years of age with a body mass index (BMI) ≥30 kg/m2. Women who gain more than 5% of their baseline body weight in the first 6 months of DMPA use are likely to experience continued weight gain.

Health concerns

A. Osteoporosis

- Progestin-only injectable use is associated with a small loss of bone mineral density, which is usually recovered after discontinuation.
- In women aged under 18 years (who have not yet attained their peak bone mass), DMPA may be used (category 2) after all alternative options have been discussed and considered unsuitable or unacceptable.
- For women with medical risk factors for osteoporosis, other methods of contraception should be considered.
- Women are generally advised to switch to another method at age 50 years (who are approaching

the menopause when additional BMD loss will occur). If a woman does not wish to stop using DMPA, consideration may be given to continuation, providing the benefits and risks have been assessed and the woman informed of the potential risks.

- Re-evaluation of the risks and benefits of treatment for all women should be carried out every 2 years in those who wish to continue use.
- Dual energy X-ray absorptiometry (DEXA) is not recommended as a routine investigation for osteoporosis unless indicated.

B. Venous /arterial thrombo-embolism

- DMPA **should not** be used in acute stroke, ischemic heart disease (current/past history) and acute DVT/PE (category 3)
- DMPA can be used with previous history of DVT/PE (category 2).

C. Breast Cancer

- The available evidence suggests a possible association between current or recent use of hormonal contraception (including Progestin-only injectable) and a small increase in risk of breast cancer; absolute risk remains very small.
- Women with past history of breast cancer and no evidence of current disease since 5years should not be advised to use DMPA (Category3).

D. Cervical cancer

- There is a weak association between cervical cancer and use of DMPA if used for 5 years or longer. Any increased risk appears to reduce with time after stopping and could be due to confounding factors.

Who can use and cannot use injection

Perform full assessment prior decision of the contraceptive use (Table 2) and refer to Medical Eligibility Criteria (Table 6)

When to start the injection

The following table illustrating how and when to start DMPA injection in women.

Table 13: Starting Injection According to women situation

Women situations	Starting day	Additional contraceptive protection required?
Having regular menstrual cycle	• Day 1-7 of cycle • After day 7 of cycle	• No • Yes (7 days)
Amenorrhea	• Any time if it is reasonably certain she is not pregnant. Refer to table 3. • If not sure, ask for pregnancy test and provide condoms for 10 days for back up then repeat pregnancy test after 10 days, if it is negative start injection immediately	• Yes (7 days) • Yes (7 days)
Post-partum	• If breastfeeding: at 6 weeks • If not breastfeeding: - Less than 4 weeks after birth, she can start any time and no need for back up - If more than 4 weeks :she can start after she rule out pregnancy , use of back up	• Yes (7 days) • Yes (7 days)
After miscarriage or abortion	• Day 1-7: start immediately • After day 7, start any time if it is reasonably certain she is not pregnant. Refer to table 3.	• No • Yes (7 days)
Switching from COC (if taken correctly)	• Day 1-2 of the HFI	• No
	• Day 3-7 of HFI OR week 1 following the HFI	• Yes (7 days). If UPSI has occurred after Day 3 of the HFI, advise continuing the COC method for at least 7 days
	• Week 2–3 of taking COC	• No
Switching from POP (if taken correctly)	• Any time	• Yes (7 days)
Progestin-only implant (≤3 years since implant insertion)	• Any time	• No
>3 years since implant insertion	• Any time	• Yes (7 days)
Switching from Cu-IUD	• Day 1–5 of menstrual cycle	• No
	• Any other time	• Yes (7 days). If UPSI in last 7 days, retain Cu-IUD for 7 days

Instructions for use

A. Pre-Injection Preparation

- Consent: Voluntary, verbal informed consent is necessary
- Equipment**:** Antiseptic, Cotton/gauze, sterile syringe, sterile needle

B. Giving Injection

- Disinfect the skin at the injection site:
  - Buttocks (Upper outer quadrant of the glutei muscle)- preferred site OR
  - Upper arm (Deltoid), especially for women with deep adipose tissue in the gluteal area, where standard-length needles may not reach the muscle layer
- Shake vial vigorously before drawing into syringe, withdraw the fluid until vial is completely empty (not a single drop left in the vial)
- Give injection deep intra-muscular

Note: *Do not massage injection site which could speed the drug release.*

C. Explain about side effects:

- Many women do not have any side effects.
- Side effects often go away after a few months and are not harmful
- Bleeding changes are normal and not harmful.
- Lack of bleeding does not mean pregnancy.

D. Explain what to do in case of side effects:

- Keep coming for injection regularly, don't skip the next injection
- The woman can come back for help if side effects bother her or if she has other concerns for help and support. Refer to Table 14.
- Women should be explained the alarming symptoms that indicate the need of urgent medical review such as continuous heavy bleeding, shortness of breath, chest pain, leg calf pain, severe headache or weakness in limbs.

Follow up (repeat injection visits):

- Woman should return to the clinic every 13 weeks for next injection or at any time if she experiences any problems.
- At each follow up visit: check blood pressure and body weight. Ask for any side effects/complications, manage as required.
- Do pregnancy test if woman uncertain about pregnancy. Refer to (Table 3).
- Ask how the woman is doing with the method and whether she is satisfied. Ask if she has any questions or anything to discuss.
- Plan for her next injection. Agree on a date for her next injection (in 3 months). Remind her that she should try to come on time, but she should come back no matter how late she is.
- Ask a long-term client if she has had any new health problems. Address problems as appropriate. For new health problems that may require switching methods, refer to section "Problems that may require stopping injections or switching to another method"
- Ask a long-term client about major life changes that may affect her needs—particularly plans for having children and STI/HIV risk. Follow up as needed.

Method specific counselling:

- Pre-injection counseling
  - How it prevents pregnancy
  - Delayed return of fertility.
  - Describe the most common side effects
  - For lactating mothers, no effect on quantity and quality of breast milk.
  - Injection does not protect against STI/HIV and condom use is essential
- Post-injection counselling
  - Tell her not to massage the injection site.
  - Provide Instructions for return for next injection.
  - Assure the client that she can come back any time if she has problems, questions, or if she has a major change in health status; or she thinks she might be pregnant.
- Follow up counselling
  - Return every 3 months (13 weeks) for an injection.
  - If for any reason next injection is delayed, it can be given within next 2 weeks without using a backup method, but it is better to take the injection on time.

- Watch diet to prevent weight gain.
- Changes in menstrual patterns are acceptable, they will improve and will not harm her health.

Management of problems related to injection

1. Managing Late Injections:

- If the client is less than two weeks late for the injection, she can receive the injection with no additional tests or backup methods.
- If the client is more than two weeks up to two weeks late, she can have the injection in the following cases:
    - She has not had sexual intercourse since the time due last injection. Backup method (condom) should be used for seven days following the injection.
    - She has used a backup method since the last injection. Backup method (condom) should be used for seven days following the injection.
- If the client is more than two weeks late and does not meet the previous criteria: perform pregnancy test and provide condom for 10 days. Repeat pregnancy test after 10 days and if negative, injection can be given.
- It can be administered up to 7 days early without the need for additional contraceptive precautions.

2. Management of DMPA injection side effects

Table 14: Management of DMPA injection side effects

Problem	Action/Management
Irregular bleeding (spotting or light bleeding at unexpected times that bothers the client)	• Ask about regularity of taking the injections. • Ask about possible causes: vomiting or diarrhea, taking anticonvulsants or rifampicin. • Reassure it is not harmful and usually becomes less or stops after the first few months of use. • For short-term relief, give NSAID (after meals) for 5 days • If irregular bleeding continues or starts after several months of normal or no monthly bleeding: - Refer the patient to the secondary care (gynecologist) by early appointment for further evaluation and management.
Amenorrhea	• Ask about consistency and regularity of taking the injections. • Reassure her that some women using Injectable (DMPA) stop having monthly bleeding, and it is not harmful. • If pregnancy is suspected, perform pregnancy test and manage accordingly.
Heavy or prolonged bleeding (twice as much as usual or longer than 8 days)	• Ask about regularity of taking the injections. • Do pregnancy test and pelvic bimanual examination to rule out pregnancy /incomplete abortion or any other abnormality • Perform Hb test. • If pregnancy or incomplete abortion is suspected, refer client to the secondary care as an emergency for further evaluation and management. • If pregnancy is ruled out: Reassure her that it is common and not harmful and usually becomes less or stops after a few months. • For short-term relieve, advice is for a 5-day course of mefenamic acid (500 mg 2-3 times per day after meals); or 400 mg ibuprofen 2 times daily for 5 days; OR Transemic acid 1 to 1.5g three times daily for 3 to 4 days or combined oral contraceptives (COCs), taking one pill daily for 21 days, This can be taken in the usual cyclic manner or continuously without a hormone-free interval. • Suggest iron tablets and foods high in iron to prevent anemia

Problem	Action/Management
Common headache	• **Assess** history of headache prior to the contraceptive use (if symptoms have worsened after starting the contraceptives, if symptoms are suggestive of migraine headache (with or without aura), If symptoms are suggestive of other conditions). • **Check BP**. • **Treat:** - If symptoms are mild with no other suggestive abnormalities, give symptomatic treatment. - If symptoms suggest migraine with aura, help the client choose another method. - If symptoms suggest migraine without aura, the client can continue the method. • Reassure and suggest pain relievers • **If side effects persist and are unacceptable to client**: - If possible, offer another method - If headache is severe and suggestive of another abnormality, refer the patient to the secondary care for the evaluation and management of headache
Abdominal bloating/ discomfort	• Reassure; suggest local remedies. • Refer for care if abdominal pain is severe.
Changes in mood or sex drive	• Ask about life changes that could affect mood or sex drive, including relationship changes. • Give support as appropriate. • For serious mood changes, refer for care.
Weight gain	• Review diet and counsel as needed

3. Problems that may require stopping injections or switching to another method

- Unexplained vaginal bleeding
- Migraines
- Certain serious health conditions
- Hepato-cellular adenomas, malignant tumors (hepatoma)

How Long Can Women Use Progestin-only Injectable Contraceptives?

There is no upper limit for duration of use of the Progestin-only injectable. Long-term users should be reviewed at least every 2 years. In deciding whether continued use is appropriate assess risks, benefits and woman preferences.

Correcting misunderstanding about Progestin injectable contraceptive (DMPA)

- Can stop monthly bleeding, but this is not harmful.
    - It is similar to not having bleeding during pregnancy.
    - It does not mean that blood is building up inside woman.
    - Usually not a sign of pregnancy
- Does not make women infertile, even though return of fertility is delayed for 6 months to 1 year in the after stopping the use of DMPA.
- Does not cause pre-mature menopause.
- Do not cause an abortion/disrupt an existing pregnancy, does not cause birth defects

2.4.4 Sub-dermal contraceptive Implants

There are different types of subdermal implants available. These are: Implants with single rod (etonogestrel 68 mg implant) and implants with two rods (Levonorgestrel 75 mg implant). In Sultanate of Oman single rod implant is present. It is important to identify which type of implant was used especially when women come for Implant removal as all rods should be completely removed.
Implants are very effective for 3–5 years, depending on the type of implant, and they are immediately reversible. Ministry of Health provides the single rod implant (etonogestrel 68 mg implant).

What is the Progestin-only implant?

It is a single, radio-opaque, flexible plastic rod about the size of a matchstick (4 cm in length and 2 mm in diameter) supplied preloaded in a sterile, single-use insertion device (applicator).
The Implant contains 68 mg etonogestril and barium sulphate for radio-opacity. It is inserted subdermally in the inner side of upper arm. Trained doctors play a critical role in counselling, insertion, monitoring, and removal of Sub-dermal implant. All health care providers should receive training before performing insertions and/or removal of Sub-dermal implant.

Effectiveness of preventing pregnancy

- Sub-dermal implant provides very effective contraception for **three years** and is not user dependent.
- The first year contraceptive failure rate for the Sub-dermal implant has been estimated as **0.05%.**

Factors altering effectiveness of the Sub-dermal implant

- **Enzyme-inducing drugs** (Refer to Table 6)**:**
  - Women using enzyme-inducing drugs should be informed that the contraceptive effectiveness of the Sub-dermal implant could be reduced during use of the enzyme-inducer and for 28 days after stopping the enzyme-inducer.
- **Body weight or body mass index (BMI)**:
  - The available evidence suggests that contraceptive effectiveness of the Sub-dermal implant is not affected by body weight or body mass index. Early replacement of the implant on the basis of higher weight or BMI is not recommended.

Mechanism of Action

- Work primarily by suppressing ovulation.
- Thickening of the cervical mucus to block sperm penetration
- Affects the endometrium to make it unfavorable for implementation

Health benefits

- Reduce risk of symptomatic pelvic inflammatory disease (PID)
- May help protect against iron-deficiency anemia
- Protect endometrium in polycystic ovary syndrome as use of the Sub-dermal implant is associated with reduced endometrial thickness, thus induction of withdrawal bleeding is not required in individuals with PCOS who are amenorrhoeic during the first 3 years of use of the Sub-dermal implant
- Reduced risk of ectopic pregnancy

Advantages

- Do not require the user to do anything once they are inserted
- Prevent pregnancy very effectively
- Are long-lasting (up to 3 years).
- No estrogen, hence, no estrogen related side effects and complications.
- Do not interfere with sex.
- Complete return of fertility on removal.
- Can be used safely and effectively for:
  - Breastfeeding mothers. etonogestestrel implant can be inserted at any time after childbirth, including immediately after delivery
  - Women who are multiparous or Nulliparous.
  - Women of any age, including adolescents and women over 40 years old.
  - Women who have just had an abortion, miscarriage, or ectopic pregnancy.
  - Women who smoke cigarettes, regardless of their age or a number of cigarettes smoked.
  - Women who have history of anemia or current anemia.
  - Women who are infected with HIV, whether or not on antiretroviral therapy.

Disadvantages

- Require specifically trained provider to insert and remove. It is considered a minor surgical procedure.
- A woman cannot start or stop the method by herself.
- Changes in bleeding pattern are common, but not harmful. Typically, prolonged irregular bleeding over the first year, and then lighter, infrequent bleeding
- Not protect from STIs/HIV
- Relatively expensive method.

Side effects

- **Changes in bleeding patterns:**
  - Irregular episodic bleeding; for a minority, these bleeding/spotting episodes may be frequent or prolonged.
  - Amenorrhea. Bleeding pattern may change at any time.
- **Other side effects**
  - Headache, Abdominal pain.
  - Mood changes, Nausea.
  - Breast tenderness, dizziness.
  - Acne (can improve or worsen)
  - Weight change
  - Enlarged ovarian follicle

Contraindications

Sub-dermal implant is contraindicated in:

- Current or past history of thrombosis or thromboembolic disorders.
- Known or suspected pregnancy.
- Hormone-sensitive cancers (e.g., breast cancer).
- Unexplained vaginal bleeding.
- Severe liver disease or liver tumors.

Complications

Potential users should be made aware that some rare complications associated with Sub-dermal implant insertion may occur including:

- **Infection at insertion site:** If occurs, most likely within the first two months after insertion.
- **Local migration** (about 2cm). Sub-dermal implant can be found in another place in the body and, very rarely, distant intravascular migration due to improper insertion. Users should be advised how to feel the implant in situ.
- **Expulsions:** Rare; most occur within first four months after insertion.
- **Difficult removal**: Rare if inserted properly and removed by a trained provider

Who can and cannot use Sub-dermal implant

Perform a full assessment before the decision of the contraceptive use (Table 2) and refer to Medical Eligibility Criteria (Table 6)

When to insert Sub-dermal implant

Rule out pregnancy before inserting the implant and if she was using hormonal contraceptives

The following table illustrates when to insert Sub-dermal implant.

Table 15: Starting the sub-dermal implant according to woman situation

Women situations	When to insert?	Need of backup
Having menstrual period (No recent contraception)	**Day 1-5** of normal menstrual cycle	**No**
	After day 5 of menstrual cycle, Rule out pregnancy	**Yes**, for 7 days
Amenorrhea/No monthly bleeding	**Not related to childbirth or breastfeeding:** She can have implants inserted at any time if it is reasonably certain she is not pregnant or ask for pregnancy test and provide condoms for 10 days as back up, then repeat pregnancy test after 10 days, if it is negative then start)	**Yes**, for the first 7 days after insertion
Post-partum (Regardless of Breast feeding)	**< Day 21**	**No**
	≥ **Day 21**	**Yes:** for 7 days
After miscarriage or abortion	**Within 5 days**: Insert Immediately	**No**
	If it is more than 5 days: she can have implants inserted any time if it is reasonably certain she is not pregnant	**Yes,** for the first 7 days after insertion.
Switching from a hormonal method	**- If it was used consistently and correctly,** insert the implant Immediately, or if it is otherwise reasonably certain she is not pregnant. No need to wait for next menses	**No**
	- **If it is not used correctly**, rule out pregnancy.	**Yes**: for the first 7 days after insertion.
	- Injectable users can have implants inserted within the reinjection window	**No**
If she is switching from Copper-Bearing IUD,	**- Days 1–5** of menstrual cycle	**No**
	- **After day 5** of menstrual cycle	Yes for 7 days
Replacing the previous implant	- If (in situ ≤ 3 years): replace immediately	**No**
	- If expired (in situ >3 years): rule out pregnancy	**Yes,** for the first 7 days after insertion.

Insertion of Sub-dermal implant

A. Preparation

i) Pre-insertion assessment

Before insertion:

1. Conduct a thorough medical history and physical examination.
2. Exclude pregnancy through a history, physical examination, or pregnancy test.
3. Confirm that the woman does not have any contraindication for the use of Sub-dermal implant
4. Discuss benefits, risks, side effects, and the insertion/removal process with the patient.
5. Obtain informed consent.

ii) Required Items for Sub-dermal implant insertion

The following are needed for the implant insertion:

- An examination table for the woman to lie on
- Sterile surgical drapes, sterile gloves, antiseptic solution (preferred Betadine solution), permanent marker
- Local anesthetic, needles, and syringe
- Sterile gauze, adhesive bandage, pressure bandage
- Ensure resuscitation equipment is available as required. There is a small risk of collapse due to vasovagal reaction or anaphylaxis.

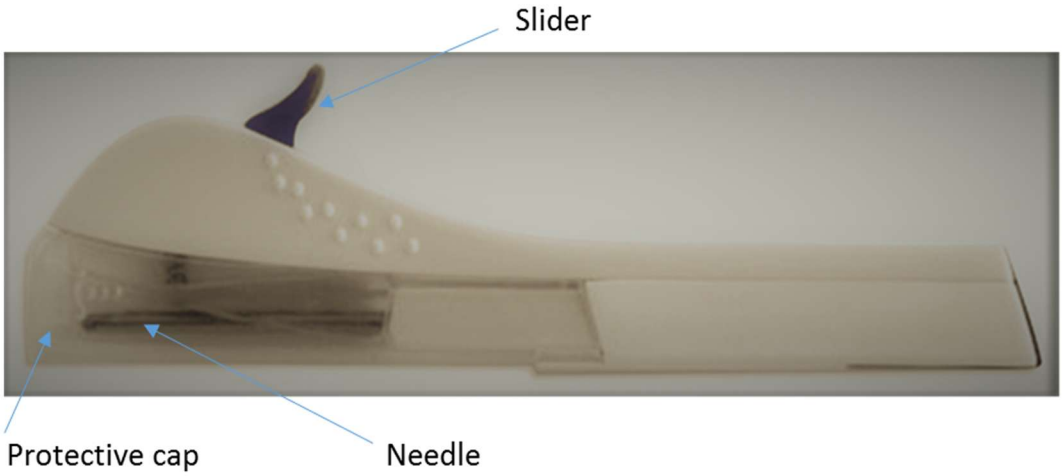


Illustration 1: An applicator and its parts

B. Insertion Procedure

Step (1): Positioning the patient

Ask the woman to lie on her back on the examination table with her non-dominant arm flexed at the elbow and externally rotated so that her wrist is parallel to her ear, or her hand is positioned under her head (Illustration 2).

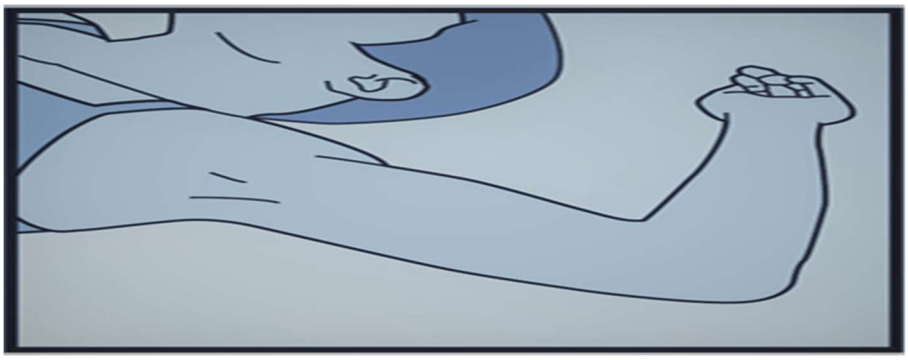


Illustration 2: Arm Positioning

Step (2): Identifying the insertion point

Identify the insertion site which is at the inner side of the non-dominant upper arm. The sulcus between biceps and triceps should be avoided to reduce risk of neurovascular damage and intravascular insertion. Identify the sulcus line (the groove between brachialis/biceps anteriorly and triceps posteriorly) by asking the individual to tense the muscles. Consider marking the sulcus line.

Measure 8–10 cm along the sulcus line from the medial epicondyle. From this point measure 3–5 cm posteriorly over triceps, perpendicular to the sulcus line.

The implant should be inserted sub-dermally just under the skin to avoid the large blood vessels and nerves that lie deeper in the subcutaneous tissue in the sulcus between the triceps and biceps muscle, (Illustration 3).

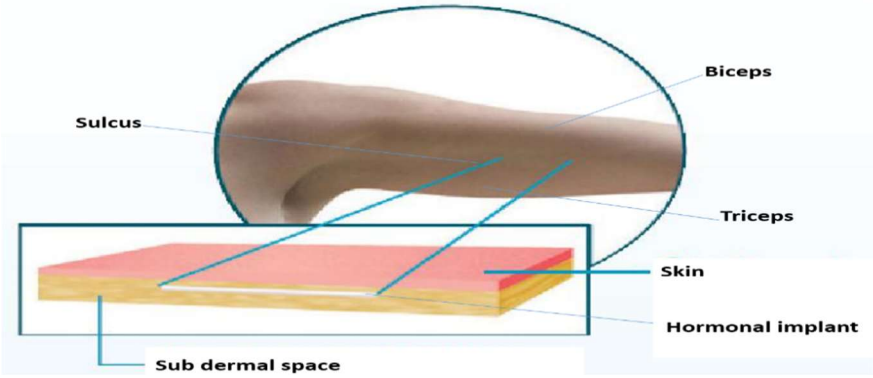


Illustration 3: Subdermal Insertion Point

Step (3): Making a mark to identify the insertion site

Make two marks with a permanent marker: first, mark the spot where the etonogestrel implant will be inserted, and second, mark a spot 5 centimeters proximal to the first mark (Illustration 4). This second mark will later serve as a direction guide during insertion.

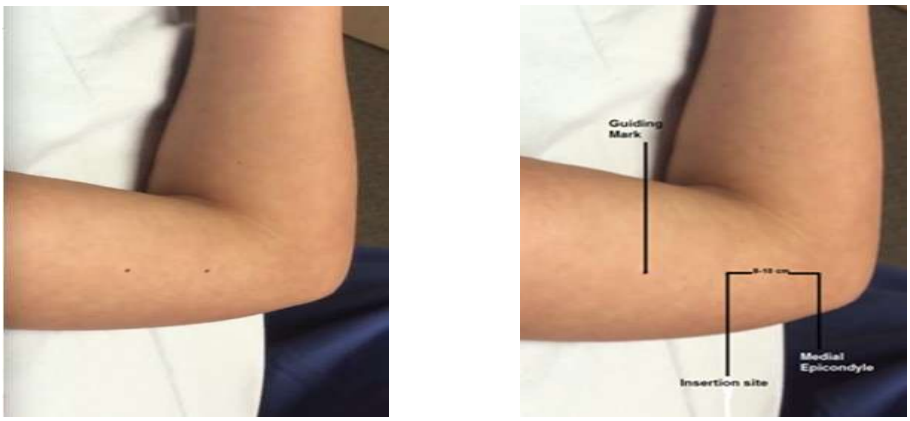


Illustration 4: Mark the Insertion Site

Step (4): Clean the insertion site with an antiseptic solution.

Put on gloves (non-sterile or sterile) and clean the skin at the insertion site using chlorhexidine and alcohol

- A 'no-touch' technique should be used from this point on to minimize infection risk.
- Ensure that the arm remains in the correct insertion position as described above; do not straighten the arm during insertion.

Step (5): Anaesthetize the insertion site

Anesthetize the insertion area (for example, with anesthetic spray or by injecting 2 ml of 1% lidocaine just under the skin along the planned insertion tunnel).

Step (6): Prepare the applicator

Remove the sterile pre-loaded disposable Sub-dermal implant applicator carrying the implant from its blister. Keep the Sub-dermal implant needle and rod sterile. The applicator should not be used if sterility is in question. If contamination occurs, use a new package of Sub-dermal implant with a new sterile applicator.

Step (7): Remove the applicator cap

Hold the applicator just above the needle, at the textured surface area. Remove the transparent protection cap by sliding it horizontally in the direction of the arrow away from the needle (Illustration 5). If the cap does not come off easily, the applicator should not be used. You can see the white colored implant by looking into the tip of the needle. Do not touch the grey slider until you fully inserted the needle subdermally, as it will retract the needle and prematurely release the implant from the applicator.

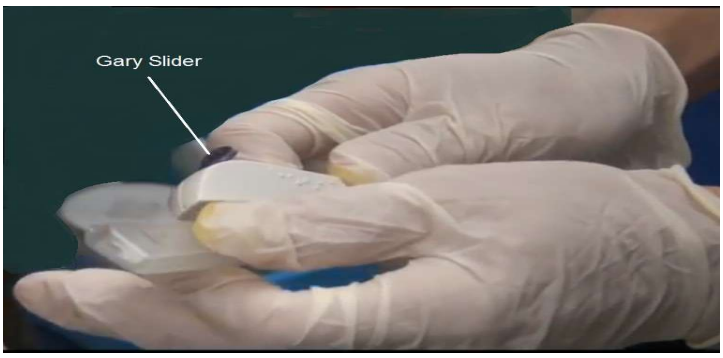


Illustration 5: Remove the Applicator Cap

Step (8):

With your free hand, stretch the skin around the insertion site with your thumb and index finger.

Step (9):

Puncture the skin with the tip of the needle angled about 30° (Illustration 6).

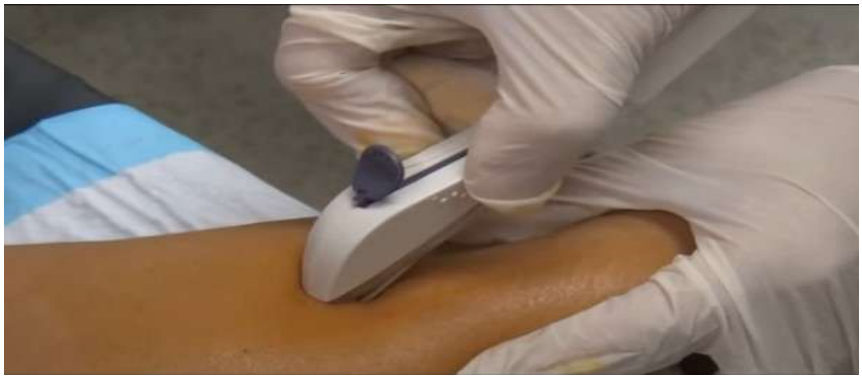


Illustration 6: Applicator Needle Insertion

Step (10):

Once the skin has been punctured, lower the applicator to a horizontal position. While lifting the skin with the tip of the needle (Illustration 7), slide the needle to its full length. You may feel a slight resistance, but do not exert excessive force. If the needle is not inserted to its full length, the implant will not be inserted properly. You can best see the movement of the needle if you are seated and are looking at the applicator from the side and NOT from above. In this position, you can clearly see the insertion site and the movement of the needle just under the skin.

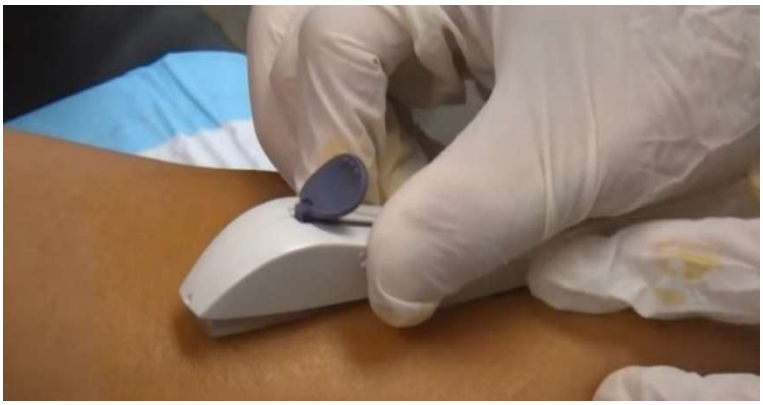


Illustration 7: lift the skin and slide the needle horizontally

Step (11):

Keep the applicator in the same position with the needle inserted to its full length. If needed, you may use your free hand to keep the applicator in the same position during the following procedure. Unlock the purple slider by pushing it slightly down. Move the slider fully back until it stops (Illustration 8). The implant is now in its final sub dermal position, and the needle is locked inside the body of the applicator. **The applicator can now be removed. If the applicator is not kept in the same position during this procedure or if the purple slider is not completely moved to the back, the implant will not be inserted properly**

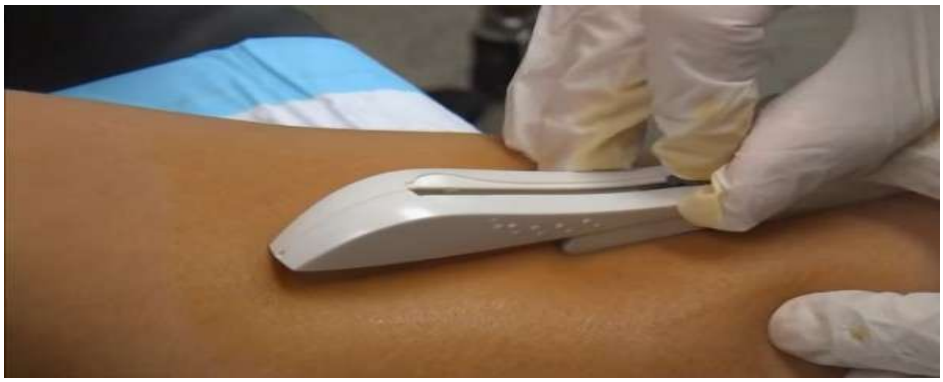


Illustration 8: Release the Implant by Unlocking the Purple Slider

Step (12):

Always verify the presence of the implant in the woman's arm immediately after insertion by palpation. By palpating both ends of the implant, you should be able to confirm the presence of the 4 cm rod (Illustration 9).

Illustration 9: palpate both ends of the implant

If you cannot feel the implant or are in doubt of its presence:

- Check the applicator. The needle should be fully retracted and only the grey tip of the obturator should be visible.
- Use other methods to confirm the presence of the implant.
- Suitable methods are:
  - Two-dimensional X-ray,
  - Computerized tomography (CT scan),
  - Ultrasound scanning (USS) with a high-frequency linear array transducer (≥10 MHz)
  - Magnetic Resonance Imaging (MRI).

Till the presence of the implant has been verified, the woman should be advised to use a non-hormonal contraceptive method, such as condoms.

Step (13):

Place a small adhesive waterproof bandage over the insertion site. Request that the woman palpates the implant.

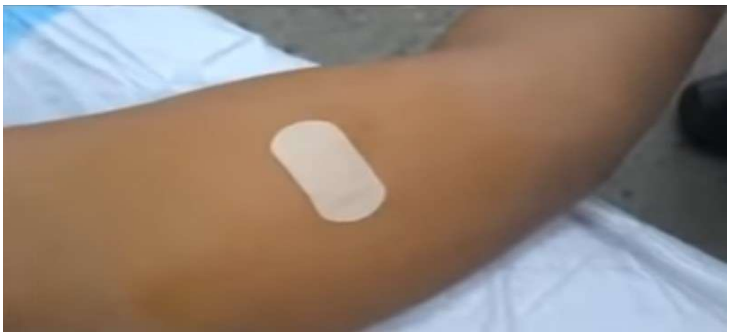


Illustration 10: Apply an adhesive bandage over the insertion site

Step (14):

Apply a pressure bandage with sterile gauze to minimize bruising. The woman may remove the pressure bandage in 24 hours and the small bandage over the insertion site after 3 to 5 days.

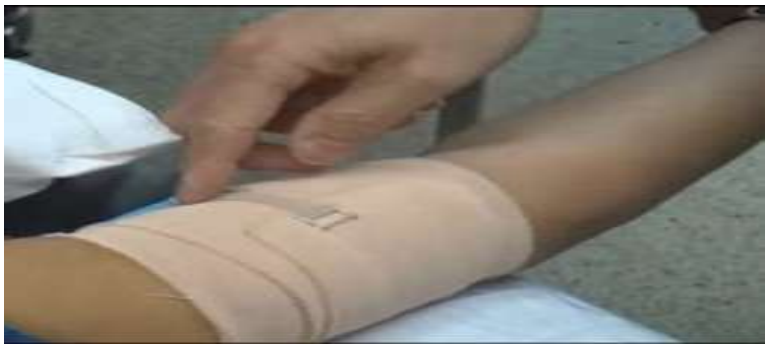


Illustration 11: Apply a pressure bandage

Step (15):

Complete the USER CARD and give it to the woman to keep. Also, complete the PATIENT CHART LABEL and affix it to the woman's medical record.

Step (16):

The applicator is for single use only and should be disposed of by the Center for Disease Control and Prevention guidelines for handling of hazardous waste.

Practical complications of insertion

Non-insertion

Sub-dermal implant has inbuilt safety features to reduce the risk of non-insertion, but it is still important to check for the presence of the implant in the applicator and to palpate the skin after insertion. The applicator should be checked immediately at the end of the insertion procedure. The needle should be fully retracted and only the grey tip of the obturator should be visible.

Deep insertion

The correct way of insertion of implant should be situated subdermally (subcutaneously), just under the skin. Significant migration of the implant is not thought to occur when an implant has been correctly inserted; therefore, deep implant insertions are more likely a result of the insertion technique. If an implant is inserted too deeply, it may be difficult to remove and/or locate, and there is greater potential for neurovascular injury, infection, and scar formation.

Nerve or vascular injury

Sub-dermal implant-states that the implant should be inserted at the inner side of the upper arm to avoid the large blood vessels and nerves that lie deeper in the connective tissue between the Biceps and triceps muscles.

Removal of Sub-dermal implant

A. Preparation

Before initiating the removal procedure, the healthcare provider should carefully read the instructions for removal and consult the USER CARD and/or the PATIENT CHART LABEL for the location and type of the implant. The exact location of the implant in the arm should be verified by palpation. If the implant is not palpable, ultrasound with a high-frequency linear array transducer (10 MHz or greater) or magnetic resonance Imaging (MRI) can be performed to verify its presence. A non-palpable implant should always be first located prior to removal using ultrasound or MRI. If these imaging methods fail to locate the implant, an etonogestrel blood level determination can be used for verification of the presence of the implant.

After localization of a non-palpable implant, consider conducting removal with ultrasound guidance. There have been occasional reports of migration of the implant; usually this involves a minor movement relative to the original position. This may complicate localization of the implant by palpation, ultrasound

or magnetic resonance imaging, and removal may require a larger incision and more time.

Exploratory surgery without knowledge of the exact location of the implant is strongly discouraged. Removal of deeply inserted implants should be conducted with caution in order to prevent injury to deeper neural or vascular structures in the arm and should be performed by healthcare providers familiar with the anatomy of the arm (Refer to algorithm 4)

Before removal of the implant, the health care provider should confirm that:

- Remove the implant under aseptic conditions.
- The following equipment are needed for removal of the implant:
  - An examination table for the woman to lie on
  - Sterile surgical drapes, sterile gloves, antiseptic solution, permanent marker (optional)
  - Local anesthetic, needles, and syringe
  - Sterile scalpel, forceps (straight and curved mosquito)
  - Skin closure (steri-strips), sterile gauze, an adhesive bandage, and pressure bandages.
  - Resuscitation equipment

Removal Procedure

Step (1): Identify the implant by palpation

Clean the site where the incision will be made and apply an antiseptic. Palpate the full length of the implant if possible. Ensure that is applied at the proximal end and mark the distal end (end closest to the elbow), for example, with a permanent marker (Illustration 12). If the implant is impalpable, difficult to feel or likely to be difficult to remove, do not attempt removal and refer to surgeon

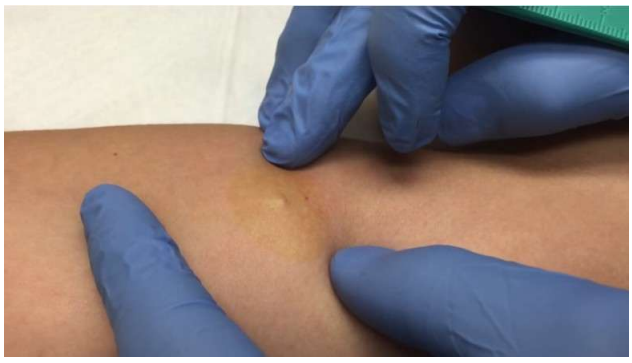


Illustration 12: Identify the implant by palpation

Step (2): Anaesthetize the removal site

Anesthetize the arm, for example, with 0.5 to 1 ml 1% lidocaine at the marked site where the incision will be made (Illustration 13). Be sure to inject the local anesthetic **under** the implant to keep it close to the skin surface.

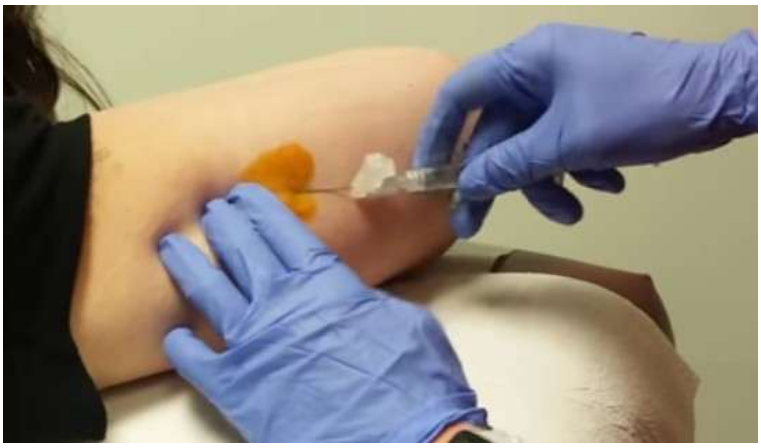


Illustration 13: Anaesthetize the removal site

Step (3):

Push down the proximal end of the implant (Illustration 14) to stabilize it; a bulge (pop-up) may appear indicating the distal end of the implant. Starting at the distal tip of the implant, make a longitudinal incision of 2 mm towards the elbow.

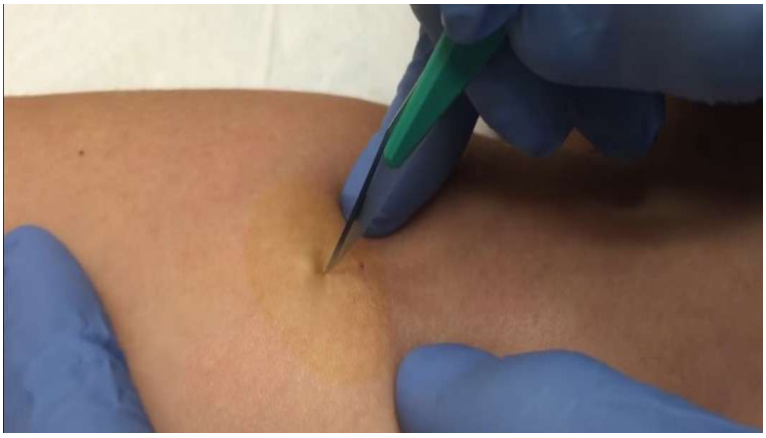


Illustration 14: Perform incision at the distal tip of Implant

Step (4):

Push the implant gently from the proximal end using the index finger of the non-removing hand to direct the distal end towards the incision site ('pop-out' technique). Push until the tip is visible at the incision. Grasp the implant with forceps (preferably curved mosquito forceps) and gently remove the implant (Illustration 15).

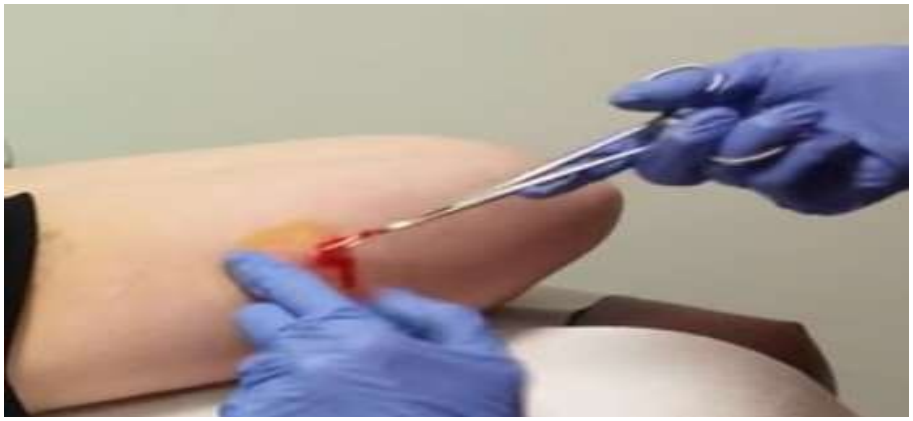
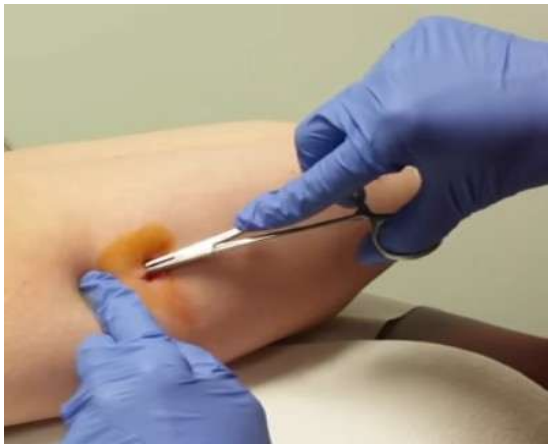
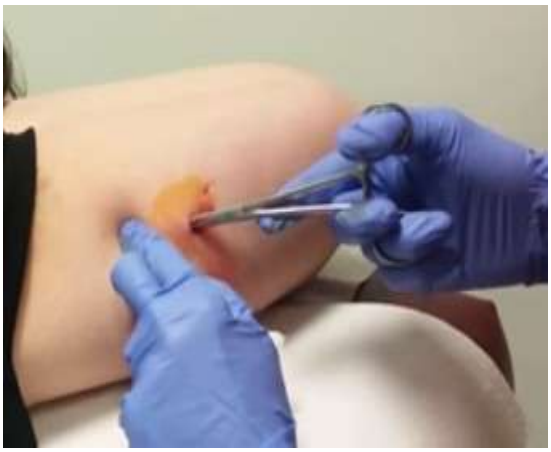


Illustration 15: Grasp the implant with forceps and remove

Step (5):

If the implant is encapsulated, make an incision into the tissue sheath and then remove the implant with the forceps (Illustration 16 and Illustration 17).





Illustrations 16 & 17: Perform Incision into the tissue sheath if encapsulated implant

Step (6):

If the tip of the implant does not become visible in the incision, gently insert forceps into the incision (Illustration 18). Flip the forceps over into your other hand (Illustration 19).

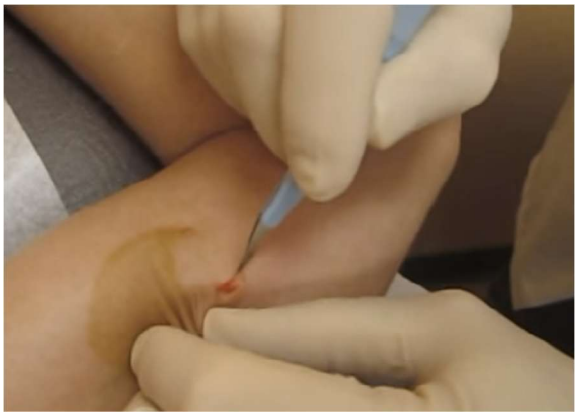


Illustration 18: Insert forceps into the incision

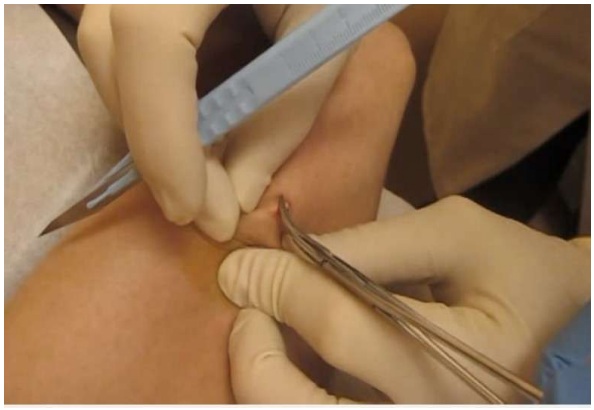


Illustration 19: Flip the forceps over into your other hand

Step (7):

With a second pair of forceps carefully dissect the tissue around the implant and grasp the implant (Illustration 20). The implant can then be removed.

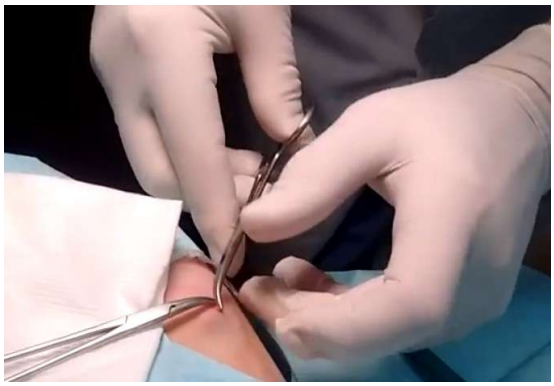


Illustration 20: Dissect the tissue around the Implant and grasp the Implant

Step (8):

Confirm that the entire implant, which is 1 rod (4 cm long), has been removed by measuring its length. (Illustration 21) Make sure that all rods are completely removed (if other types of implants were used from outside MOH such as implants with 2 rods).

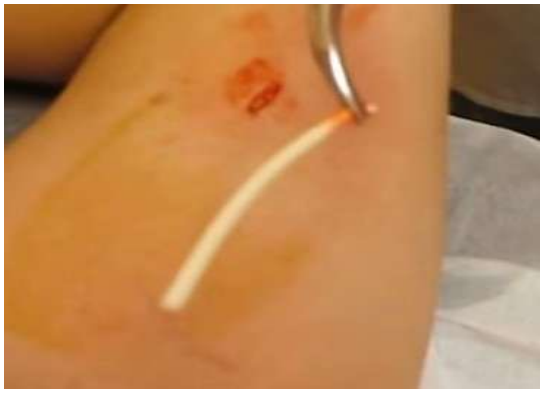


Illustration 21: Confirm removing the entire implant by measuring its length

Step (9):

After removing the implant, close the incision with a Steri-strip and apply an adhesive bandage (Illustration 22).

Illustration 22: Apply Steri-strip and an adhesive bandage.

Step (10):

Apply a pressure bandage with sterile gauze to minimize bruising. The woman may remove the pressure bandage in 24 hours and the small bandage in 3 to 5 days (Illustration 23)

Advise the patient about infection, bruising and wound care.

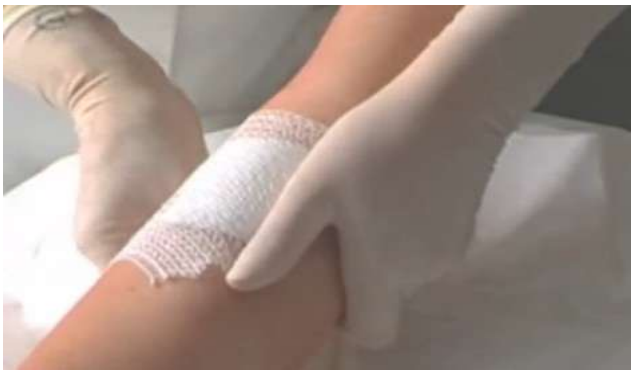


Illustration 23: Apply a pressure bandage with sterile gauze

Replacing Sub-dermal implant

Immediate replacement can be done after removal of the previous implant and is similar to the insertion procedure described in the section of the Insertion of Sub-dermal implant

The new implant is placed above or below the site of the previous implants or in the other arm. Follow the steps in the insertion instructions.

Post Insertion and Removal Instructions

- Keep arm dry: The woman should keep the insertion area dry for 4 days. She can take off the gauze after 2 days and the adhesive bandage and surgical tape when the incision heals, usually after 3 to 5 days.
- Expect soreness, bruising, pain: After the anesthetic wears off, her arm may be sore for a few days. She also may have swelling and bruising at the insertion site. This is common and will go away without treatment. She can use NSAIDS for pain relieve.
- Length of pregnancy protection: Explain that it is important to have implants removed after 3 years. She can have a new set of implants inserted if she wants. Give each woman the following information in writing on a reminder card:
  - Date of insertion
  - Month and year when implants will need to be removed or replaced

When to Return

- Assure every client that she is welcome to come back anytime—for example, if she has problems, questions, or wants another method; she has a major change in health status, or she thinks she might be pregnant.
- She has **pain, heat, pus, or redness** at the insertion site that becomes worse or does not go away, or she sees a rod coming out.
- General health advice: Woman who suddenly feels that something is seriously wrong with her health should immediately seek medical care from a nurse or doctor. Her contraceptive method is most likely not the cause of the condition, but she should tell the nurse or doctor what method she is using.

Note: *Some women get bruises at the site of insertion which usually resolves within a week after insertion.*

Follow up visits

- No routine return visit is required until it is time to remove the implants. The client should be clearly invited to return any time she wishes, however. At any future visit:
  - Ask how the client is doing with the method and whether she is satisfied. Ask if she has any questions or anything to discuss.
  - Ask especially if she is concerned about bleeding changes. Give her any information or help that she needs.
  - Ask a long-term client if she has had any new health problems since her last visit. Address problems as appropriate.

Management of problems related to Sub-dermal implant

1. Management of side effects

Table 16: Management of side effects associated with Sub-dermal implant

Problem	Action/Management
Irregular bleeding (bleeding at unexpected times that bothers the client)	• Reassure the client that this is common and not harmful and usually becomes less or stops after the first year of use. • Give NSAID: ibuprofen (400 mg 3 times per day for 5 days) OR Mefenamic acid (500 mg 3 times per day for 5 days when irregular bleeding starts) • If no relief, try one of the followings: • COCs for 3 weeks OR Tranexamic acid 1 to 1.5 g, three to four times daily for 3 to 4 days if there is heavy menstrual bleeding. • If bleeding is heavy, iron tablets may prevent anemia • If irregular bleeding continues or starts after several months of regular menses or amenorrhea, or you suspect that something may be wrong for other reasons, consider underlying conditions unrelated to method use. • **If side effects persist and are unacceptable to the client**, help her choose another method
Heavy or prolonged bleeding (twice as much as usual as or longer than 8 days)	• Reassure her that some women using implants experience heavy or prolonged bleeding. It is generally not harmful and usually becomes less or stops after a few months. • For modest short-term relief, she can try NSAIDs. OR • Tranexamic Acid 1 to 1.5 g, three to four times daily for 3 to 4 days initiated when the heavy menstrual bleeding continues. OR • Combined NSAID and Tranexamic acid can be used to control severe bleeding if renal function is normal. OR • Combined oral contraceptives with 50 µg of Ethinyl estradiol for 3weeks. • To help prevent anemia, suggest she take iron tablets and tell her it is important to eat foods containing iron • If heavy or prolonged bleeding continues or starts after several months of normal menses or amenorrhea, or you suspect that something may be wrong

Problem	Action/Management
	for other reasons, consider underlying conditions unrelated to method use. • **If side effects persist and are unacceptable to the client**, help her choose another method
Amenorrhea	• Reassure her that some women stop having menses when using implants and this is not harmful.
Ordinary headache (non-migranous)	• Paracetamol (500–1000 mg), or another pain reliever. • Any headache that gets worse or occurs more often during use of implants should be evaluated. • **If side effects persist and are unacceptable to the client,** counsel about alternative hormonal or non-hormonal methods
Abdominal pain	• Assess for acute abdominal pain • Reassure; suggest pain- killers • Follow -up if needed • Refer for care if abdominal pain is severe.
Acne or Chloasma	• If the client wants to stop using implants because of acne, she can consider switching to COCs. Many women's acne improves with COC use. • Chloasma may develop in women with history of Chloasma gravidarum advice to avoid exposure to the sun or ultraviolet radiation.
Breast tenderness	• Recommend a supportive bra, hot or cold compresses, or painkillers
Weight change	• Review healthy eating habits and exercise and counsel as needed
Mood changes or changes in sex drive	• Ask about changes in her life that could affect her mood or sex drive, including changes in her relationship with her husband. Give her support as appropriate. • Clients who have serious mood changes such as major depression should be referred for care.
Nausea or dizziness	• Reassure

2. Management of complications associated with Sub-dermal implant

Table 17: Management of problems related to Sub-dermal implant insertion

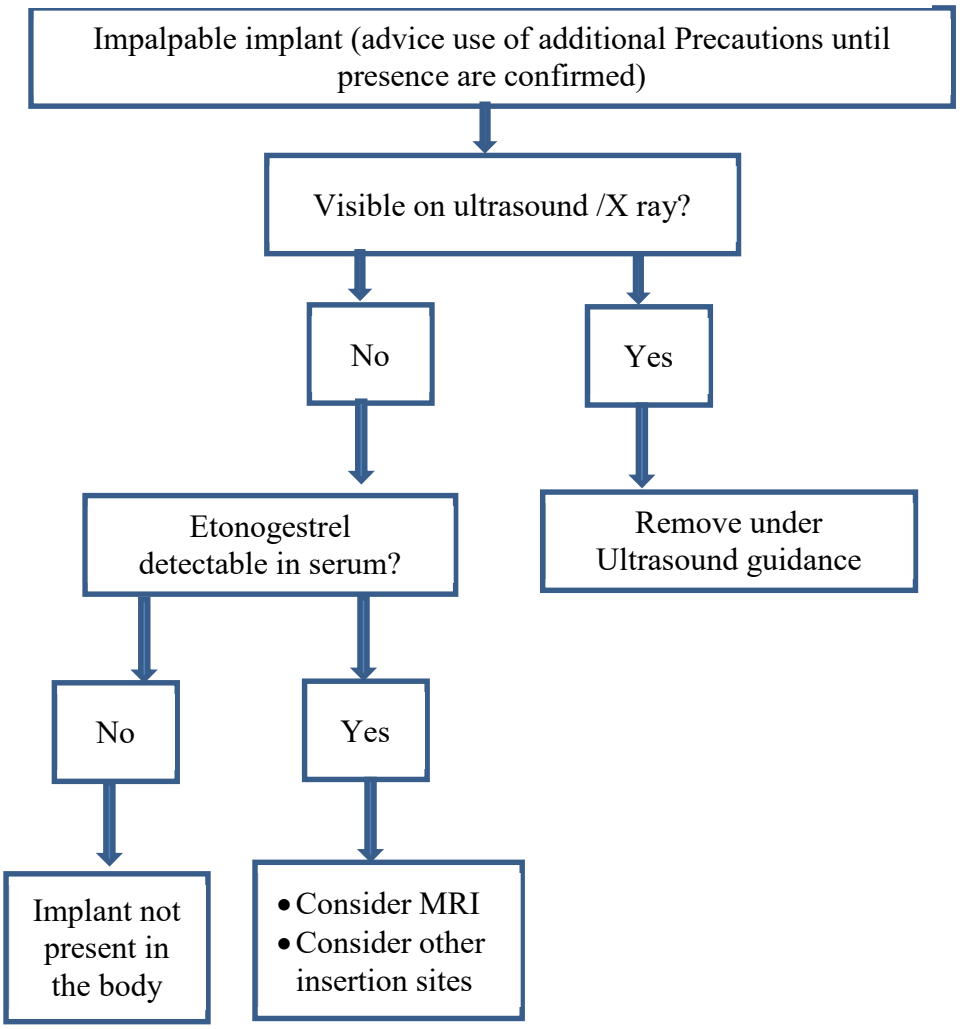
Problem	Action
Pain after insertion or removal	• Check that the bandage or gauze is not too tight; replace bandage; avoid pressing on site for few days • Give painkillers for a few days
Infection (redness, heat, pain, pus)	• Do not remove the implants. • Clean the infected area with soap and water or antiseptic. • Give oral antibiotics for 7 to 10 days. • Ask the client to return after taking all antibiotics. If the infection has not cleared, remove the implants or refer for removal. • Expulsion or partial expulsion often follows an infection. Ask the client to return if she notices an implant coming out.
Abscess (pocket of pus under the skin due to infection)	• Clean the area with antiseptic. • Cut open (incise) and drain the abscess. • 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 the infection is present when she returns, remove the implants or refer for removal. • Remove implants if no improvement
Expulsion (when the implant begins to come out of the arm)	• Rare. Usually occurs within a few months of insertion or with infection. • If no infection is present, replace the expelled rod or capsule through a new incision or refer for replacement.
Severe pain in lower abdomen	Abdominal pain may be due to: • Surgical problems, • Gynecological problems such as: **Enlarged ovarian follicles or cysts.** - A woman can continue to use implants during evaluation. - There is no need to treat enlarged ovarian follicles or cysts unless they

Problem	Action
	grow abnormally large, twist, or burst. Reassure the client that they usually disappear on their own. - To be sure the problem is resolved, see the client again in 6 weeks, if possible. **Ectopic pregnancy,** which is rare and not caused by implants, but it can be life-threatening, In the early stages of ectopic pregnancy, symptoms may be absent or mild, but eventually they will become severe. Following symptoms and signs increase the suspicion of ectopic pregnancy - Unusual abdominal pain or tenderness - Abnormal vaginal bleeding or no monthly bleeding—especially if this is a change from her usual bleeding pattern - Light-headedness or dizziness - Fainting • If ectopic pregnancy or other serious health condition is suspected, escort the patient for immediate diagnosis and care.
Broken implant	• Contraceptive efficacy will not be affected by implant breakage. The decision whether or not to remove and replace a broken or bent Implanon or Nexplanon must be based on clinical judgment and the patient preference. • For removal: use 'pop-up' technique from each end through a single incision. However, clinical judgement is required in individual cases. After removal, the implant should be checked and measured to ensure that the entire 4 cm device has been removed.

Impalpable Implant

Women with an impalpable implant should be advised to use additional precautions or avoid intercourse until the presence of an implant is confirmed. The location of an impalpable or deep implant should be identified before exploratory surgery (Refer to step 6 in removal procedure)

Algorithm 4: Management of impalpable implant



3. Problems that may require switching the method

Table 18: New problems that may require switching the method

Problem	Action
Unexplained vaginal bleeding (that suggests a medical condition, not related to the method)	• Refer or evaluate by history and pelvic examination. Diagnose and treat as appropriate. • If no cause of bleeding can be found, consider stopping implants to make diagnosis easier. Provide another method of her choice to use until the condition is evaluated and treated (not progestin-only injectable or a copper-bearing or hormonal IUCD). • If bleeding is caused by sexually transmitted infection or pelvic inflammatory disease, she can continue using implants during treatment.
Migraines	• If she has migraine headaches without aura, she can continue to use implants if she wishes. • If she has migraine aura, remove the implants (catagory3) • Help her choose a method without hormones
Certain serious health conditions (suspected blood clots in deep veins of legs or lungs, serious liver disease, or breast cancer).	• Remove the implants or refer for removal. • Give her a backup method to use until her condition is evaluated. • Refer for diagnosis and care if not already under care.
Heart disease due to blocked or narrowed arteries (ischemic heart disease) or stroke	• A woman who has one of these conditions can safely start implants. If, however, the condition develops while she is using implants: − Remove the implants or refer for removal. − Help her choose a method without hormones. − Refer for diagnosis and care if not already under care
Suspected pregnancy	• Assess for pregnancy, including ectopic pregnancy • Remove the implants or refer for removal • There are no known risks to a fetus conceived while a woman has implants in place

Unusual situations

Implant insertion and removal in anticoagulated individuals, those with inherited bleeding disorders and people with low platelet count

- Both IMP insertion and removal are minor procedures with minimal risk of significant bleeding
- Local haemostasis is likely to be achieved by application of wound site pressure.
- The risk of significant bleeding associated with these procedures in individuals using warfarin (with a stable international normalised ratio (INR)), direct-acting oral anticoagulants, low molecular weight heparin or antiplatelet drugs is likely to be low. In contrast, there is a risk of thrombosis if anticoagulants are stopped, which could in some cases have life-threatening consequences
- Warfarin, direct oral anticoagulants, low molecular weight heparin and antiplatelet drugs generally should not be stopped for IMP insertion or removal
- For individuals using direct oral anticoagulants or low molecular weight heparin, procedures should be scheduled to coincide with the lowest anticoagulant effect; for example, if the dose is taken daily in the evening, insertion in the afternoon would carry a lower bleeding risk than insertion in the morning.
- Non-steroidal anti-inflammatory drugs for pain relief should be avoided in the periprocedural period to avoid increased risk of bleeding
- Expert opinion suggests that a platelet count >50x109 /L is adequate for standard IMP insertion and removal procedures.
- For individuals with inherited bleeding and platelet disorders and platelet count<50x109/L, it should be discussed with hematologist.

Correcting Misunderstandings

- Stop working once they are removed. Their hormones do not remain in a woman's body.
- Can stop monthly bleeding, but this is not harmful. It is similar to not having monthly bleeding during pregnancy. Blood is not building up inside the woman.
- Do not make women infertile.
- Do not move to other parts of the body.
- Substantially reduce the risk of ectopic pregnancy
- Does not cause birth defects
- Woman can do her usual work immediately after leaving the clinic as long as she does not bump the insertion site or get it wet.

2.4.5 Copper - Intrauterine Contraceptive Device (IUCD)

Intrauterine contraceptive device (IUCD)

There are two types of intrauterine contraceptive device (IUCD), those containing copper (Cu-IUCDs) which is non – hormonal contraceptive method, effective for 10 years and those containing hormone Progestin (LNG-IUCDs) effective for 5 years. The Copper IUCD is a small, flexible, (T) shaped plastic frame with copper sleeves or wire around it. Almost all types of IUCDs have one or two strings, or threads, tied to them. The strings hang through the cervix into the vagina. Currently MOH is providing (Copper T 380 A) type.

Effectiveness

- Highly effective.
- The contraceptive failure rate for a Cu-IUCD in the first year of use has been estimated at 0.8% (typical use) and 0.6% (perfect use).
- Contraceptive effectiveness of IUCD is not affected by enzyme-inducing drugs or weight/body mass index (BMI).

Mechanism of action

- Works primarily by causing a chemical change that damages sperm and ovum before they meet, thus it prevents fertilization.
- Copper has spermicidal properties, reducing sperm motility, viability, and the ability to fertilization.
- The Cu-IUCD also causes an inflammatory response within the endometrium, which could impair implantation.

Return of fertility

- No delay in return to the fertility after removal of the IUCD, immediately reversible

Health benefits

- May help protect against cervical and endometrial cancer.

Advantages

- Highly effective, acts immediately and provides 10 years' protection against pregnancy.
- Can be used by women who are breast feeding, obese, or have concurrent illness (migraine, VTE, DM, cardiovascular disease, or taking long-term enzyme –inducing drugs (e.g. anticonvulsants)
- Does not interfere with intercourse.
- Immediate return of fertility on removal.
- Convenient, with nothing to remember, no daily actions and not a user dependent.
- Few method's related side effects.
- Safe choice for heavy smoker women >35 year
- In addition to regular contraception, the Cu-IUD can be used for |Emergency Contraception (EC), if inserted within 5 days after the first episode of unprotected sexual intercourse (UPSI) that cycle.

Disadvantages

- **Insertion/removal** requires training and can cause some pain or discomfort for the women
- **Expulsion/malposition:** risk of expulsion is 1 in 20, usually occurs <3 months after insertion
- **Pelvic Inflammatory Disease (PID):** increase risk of infection <21 day after insertion in women who have chlamydia or gonorrhea at the time of IUCD insertion, although rare as screening of STI is mandatory before or at the time of insertion.
- **Ectopic pregnancy** although is less than using no contraception (rate in IUCD users is12 in 10,000, rate in women using no contraception is 65 in 10,000). However, the risk is higher than if using hormonal contraceptive methods-consider ectopic pregnancy in any women who has a Copper IUCD and develops abdominal pain.
- Need to check strings after each menstrual period.
- Woman cannot discontinue on her own
- May contribute to anemia if women have already low iron stores before insertion, as there may be heavier monthly bleeding.

Side effects

- After insertion: there will be some cramps for several days, some spotting for few weeks.
- Cramps and pain during monthly bleeding
- Changes in bleeding patterns (especially in the first 3 to 6 months) including: prolonged and heavy monthly bleeding, irregular bleeding, spotting between periods.

Complications (rare)

- Pelvic infection (<1%).
- Puncturing (perforation of the wall of the uterus): (1–2 per 1000 insertions in the general population but higher in postpartum individuals).
- Miscarriage, preterm birth in the rare case that the woman becomes pregnant with the IUCD.
- Vasovagal attack: rare complications of IUCD insertion (Pallor, sweating and bradycardia.)

Who can and cannot use Copper IUCDs

Perform a full assessment before the decision of the contraceptive use (Table 2) and refer to Medical Eligibility Criteria (Table 6)

When to provide Copper Intrauterine Device (IUCD)

Table 19: Insertion of IUCD according to women situations

Woman situation	Timing of insertion	Need of Back up method
Menstrual period	• **During the first 7 days or towards the end of the menstruation** as there is little probability the women is pregnant, and bleeding and cramping are less noticeable • **After 7 days of menstruation,** exclude pregnancy.	**No,** as the Copper IUCD provides immediate contraception. **Yes** for 7 days
After childbirth (regardless of breastfeeding status)	• **Any time within 48 hours after giving birth (including LSCS)**, provider needs specific training in postpartum insertion • **After 48 hours and up to 4 weeks postpartum:** IUCD insertion is not recommended due to a higher risk of expulsion, delay insertion until 4 weeks or more. Offer condoms or another method if she is not fully breastfeeding • **After 4weeks -6 months postpartum:** Must be reasonably certain she is not pregnant prior insertion.	**No** **No**
After miscarriage (if no infection is present)	• **Within 12 days after a first or second-trimester abortion or miscarriage**: Can be inserted immediately • **After 12 days:** Any time if client is reasonably certain that she is not pregnant. • **After second-trimester abortion or miscarriage:** IUCD insertion requires specific training. If not specifically trained, delay insertion until at least 4 weeks after miscarriage or abortion.	**No** **No**
Fully or nearly fully breastfeeding	• If the IUCD is not inserted within the first 48 hours and her monthly bleeding has not returned, she can have the IUCD inserted any time between four weeks and six months after giving birth, after excluding pregnancy. • If her monthly bleeding has returned; she can have the IUCD inserted as advised for women having menstrual cycles (see above)	**No**
Amenorrhea	• Any time if it can be determined that she is not pregnant	**No**
Switching from another method.	• **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. • If she is switching from an injectable, she can have the IUCD inserted when the next injection would have been given.	**No**
For emergency contraception	• Within five days after unprotected sex.	**No**
Genital infection	• Insert after infection has been treated and cured	

Insertion of IUCD

A. Pre -insertion assessment

Before insertion:

1. Conduct a thorough medical history and physical examination (including STI screening)
2. Exclude pregnancy through a history, physical examination, or pregnancy test.
3. Confirm that the woman does not have any contraindication for the use of cu-IUCD
4. Discuss benefits, risks, side effects, pre-insertion, post- insertion, warning signs and follow up with the patient.
5. Confirm that the woman does not have allergies to copper.
6. Check it is a suitable time to insert and any requirement for additional contraception/follow-up
7. Obtain informed consent.

B. Method specific counselling

Pre- insertion Counseling:

- How it prevents pregnancy
- Failure rate.
- The most common side effects.
- The need for screening and clinical assessment.
- Timing of insertion and which method to use if insertion has to be delayed.
- Insertion procedure and associated risks including pain, infection, expulsion, perforation, failure, non-visible threads
- Signs/symptoms that require review
- How and when to check threads
- Removal procedure
- Expiry date on IUCD and analgesia checked
- Freedom of the client to discontinue the method whenever desired.
- No delay in return of fertility after removal.

Post-Insertion Counseling

- Advise the patient to check for the strings monthly after menstruation.
- Inform about potential cramping and spotting, which usually resolves within a few days.
- Explain to the client that changes in bleeding patterns are not signs of illness and usually become less after several months after insertion.
- Explain what to do if the IUCD strings cannot be felt or if the device is expelled.
- Schedule a follow-up visit 4-6 weeks after insertion to confirm proper placement
- Encourage woman to return if she experience: (Missing or lengthened strings, severe pelvic pain or fever, heavy bleeding or unusual vaginal discharge.)
- Assure the client that she can come back any time if she has problems, questions, or if she has a major change in health status; or thinks she might be pregnant.

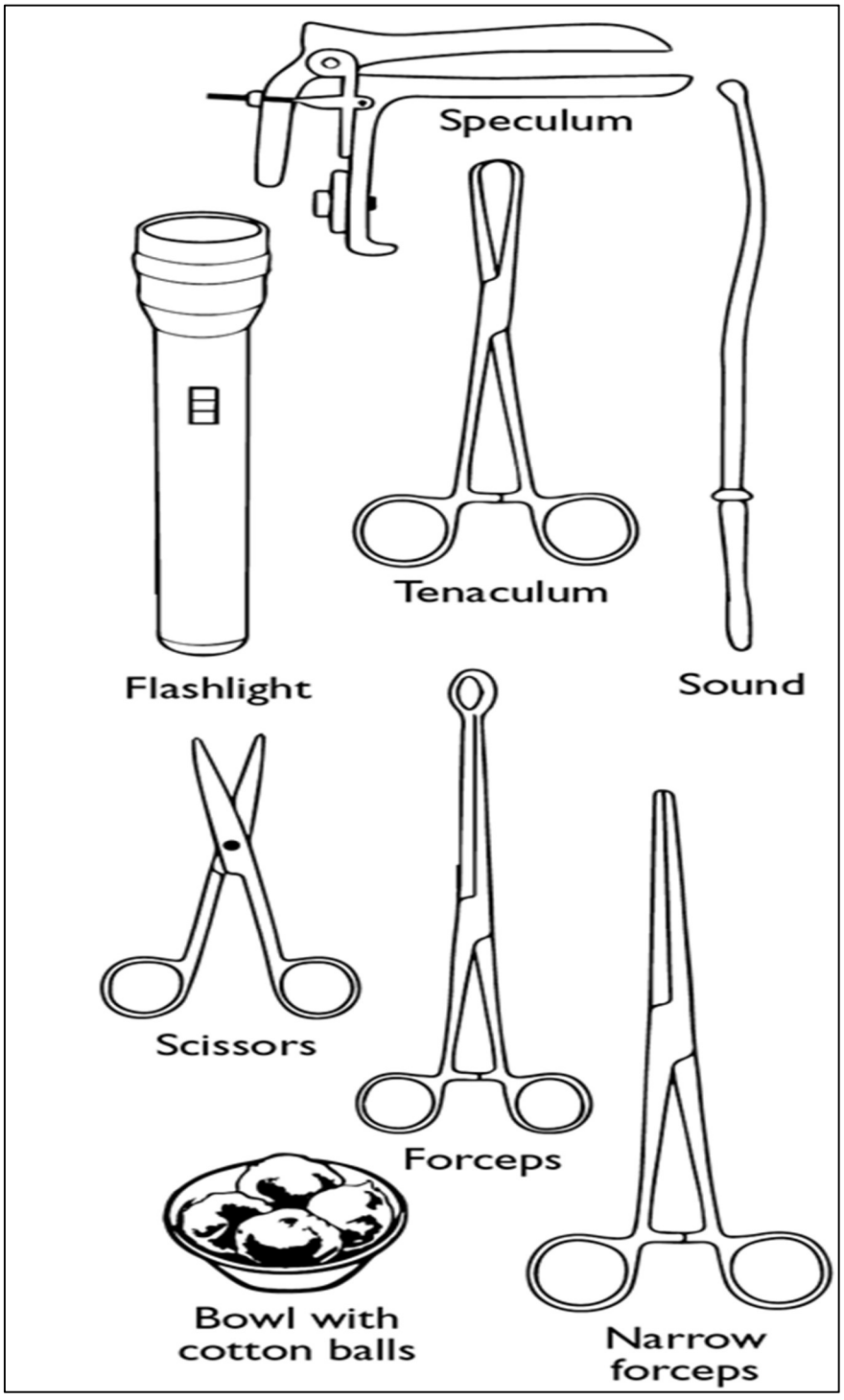
Explain about warning signs for urgent return (PAINS)

- **P**: Period late, abnormal spotting or bleeding.
- **A**: Abdominal pain, pain with intercourse.
- **I**: Infection exposure, symptoms of pelvic infection e.g. abnormal discharge.
- **N**: Not feeling well, fever and chills.
- **S**: String missing, shorter or longer.

C. Instruments and equipment preparations for IUCD insertion:

- Bivalve Speculum (small, medium and large)
- Uterine Tenaculum
- Uterine Sound
- Forceps (e.g. Uterine, Dressing, Sponge)
- Scissors
- Bowel for antiseptic solution.
- Gloves: new disposable, single use, sterile examination gloves
- Antiseptic solution for cleaning cervix (Savlon)
- Gauze or cotton balls
- Light source sufficient to visualize cervix (flash light can do)
- Copper T 380 A, in an unopened, undamaged sterile package.

Figure 2: IUCD Insertion Instruments



D. Preventing Infection during IUCD Insertion

Follow proper infection-prevention procedures and use high-level disinfected or sterile instruments.

- 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 IUD or uterine sound touch any unsterile surfaces (for example, hands, speculum, vagina, table surface).
- 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 the uterine sound and the loaded IUCD inserter only once each through the cervical canal

E. Precautions of IUCD Insertion

- Only if both the speculum and bimanual examination are normal, the IUCD should be inserted.
- To minimize the risk of infection, basic recommended infection prevention measures should be taken during each insertion and removal procedure.

Note: Non-adherence to the above instructions can have serious effects on the safety of clients and the clinical staff.

- It is recommended that clients remain at the clinic for 15 to 30 minutes before being discharged if experience any of the following problems post-insertion
    - Nausea
    - Mild to moderate lower abdominal pain (cramping)
    - Rarely syncope (fainting)

Do not open the pack of sterile instrument before completing the pelvic examination and the final decision to insert an IUCD has been made.

Insertion Procedure

Table 20: IUCD Insertion Procedure

TASK	RATIONALE	COMMENTS
STEP 1 • Tell client what you are going to do and encourage her to ask question. • Tell her that she may feel discomfort during some of the steps and that you will tell her in advance. • Be sure that the client has emptied the bladder just before procedure/exam.	• This helps client to relax, making insertion easier and less painful. • This helps in building confidence and trust. • This helps the client relax, making bimanual easier and less painful.	• Talk to client during procedure.
STEP 2 • Position the patient in a lithotomy position. • Inspect external genitalia. • Perform bimanual examination • Visualize the cervix with a speculum.	• Check for ulcers, sores, and groin swelling (buboes). Check for tenderness, swelling, or discharge from Bartholin's and skenes's gland. • Check for vaginal discharge, collect specimens if indicated. • Determine size, position, consistency, mobility, and tenderness of uterus. • Assess cervical motion tenderness and adnexal or cul- de-sac masses or tenderness.	• Ensure aseptic technique. • Wear disposable sterile gloves on both hands. • Speculum must be decontaminated, cleaned and sterilized after each use. • If any concerns about possible pelvic infection or pregnancy do not insert IUCD.
STEP 3 • If indicated and available, perform microscopic examination.	• Check for yeast, trichomonas or bacterial vaginosis (saline and KOH wet mount and PH test). Check for Gonococci or Chlamydia (Gram stain).	• If simple vaginitis, treat before IUCD insertion. • If suspected Gonococci (positive gram negative intra-cellular Diplococci) or Chlamydia, treat (and re-evaluate). Do not insert IUCD during infection.

TASK	RATIONALE	COMMENTS
STEP 4 • Load Copper T 380 A IUCD in sterile package (if necessary).	• Preferably use sterile gloves although sterile gloves are not a must if the IUCD is loaded in the sterile pack	• Do not load more than five minutes before the insertion. Otherwise, IUCD may not return to original shape when inserted.
STEP 5 • Insertion speculum and prep cervix and vagina. Apply Tenaculum to cervix.	• Antiseptic solution reduces the infection. • Stabilize uterus and minimize risk of perforation.	• Thoroughly apply solution to the cervix and vagina (two or more applications). • Apply gently in horizontal position (10 or 2 O'clock), slowly closing the jaws of the Tenaculum only to the first notch to minimise discomfort.
STEP 6 • Pass uterine sound.	• Sounding confirms position of the uterus and depth of uterine cavity. • Pass sound only once through the cervix (use non touch technique).	• Gently apply counter-traction when passing sound. • Do not touch the side walls of the vagina or speculum blades with sound to avoid contamination.
STEP 7 • Gently Inserting the Copper T 380 A IUCD.	• Set depth-gauge to measured depth. Carefully pass loaded inserter tube through cervical os until depth – gauge touches cervix or until resistance is felt. • Release arms of IUCD using withdrawal technique. • Remove white rod. • After arms of IUCD are released, gently push in (up) on the inserter. • Partially withdraw the inserter tube; cut strings to 3-4 cm length.	• Do not force insertion if resistance is encountered. • Apply gentle counter-traction with Tenaculum while releasing arms of IUCD. Assure high uterine placement (fundus). Ensure that pieces of strings cut off will stay in inserter tube for easy disposal.

TASK	RATIONALE	COMMENTS
STEP 8 • Before removing gloves, dispose of contaminated waste. • Wipe down contaminated surfaces with 0.5% chlorine solution.	• Minimize risk of disease transmission (HBV and HIV) to staff.	• Place contaminated (blood or mucus stained) cotton or other waste items in covered containers or bag for incinerate. • Use 0.5% chlorine solution liberally
STEP 9 • Immediately decontaminate instruments.	• Minimize risk of disease transmission (HBV and HIV) to staff	• Soak instruments for 10 minutes in 0.5% chlorine solution prior to cleaning and disinfecting. • Place disposable gloves in waste container.
STEP 10 • Teach client how to check for thread. • Have client wait in clinic for 15 minutes after insertion.	• Decrease risk of pregnancy from unsuspected loss of IUCD. • Observe for excessive cramping, which may necessitate removal if not relieved by simple analgesics (paracetamol or ibuprofen).	• If culturally acceptable and privacy available, have client perform check before leaving. • This occurs infrequently with the small copper IUCD and in women who have born children

Teach client when and how to check the IUCD string

To check the IUCD strings, the woman should:

- Wash her hands.
- Sit in a squatting position or put one foot up on a step or a ledge.
- Insert either her second or middle finger into the vagina to find the opening to the uterus (the cervix). it feels firm, like the tip of her nose
- Feel for the strings. If she feels the strings, it means that the IUCD is correctly in place.
- Never pull on the strings. This could cause the IUCD to come out and could injure the cervix
- If she cannot feel the strings, if they feel longer or shorter than normal or if she feels the stem of the IUCD protruding from the cervix, she should return to the clinic for a check-up immediately. She should not have intercourse until the IUCD is replaced unless she uses another contraceptive method.

When to check the IUCD strings?

- During the first month after insertion, the client should check the strings several times, including after her next menstrual period. After the first month, she needs only to check the strings after each menstrual period.

Check the strings if any of the following occur:

- Cramping in the lower part of the abdomen.
- Spotting between periods or after intercourse.
- Pain after intercourse, or if her husband experiences discomfort during sex. Any of these symptoms may suggest that the IUCD is being expelled. If they persist, or on checking if the strings are longer or the hard part (plastic) of the IUCD can be felt in the vagina, she should return to the clinic for a check-up.
- Tell woman that IUCD is effective immediately, if no pain and no bleeding she can have intercourse the same day.
- Tell client that it is important to check the IUCD strings to be sure that the IUCD is still in place

Follow up

Client should return to the clinic:

- First visit: After 4 to 6 weeks, then
- After 6 months, then
- After 1 year

At the first follow up visit:

- Ask the client how she is doing with the method and whether she is satisfied. Ask her if she has any questions or anything to discuss.
- Ask if she has:
    - Increasing or severe abdominal pain during sex or urination
    - Unusual vaginal discharge.
    - Fever or chills.
    - Signs or symptoms of pregnancy.
    - Not able to feel strings (if she has checked them).
    - Felt the hard plastic of an IUCD that has partially come out.
- Perform pelvic examination to:
    - Check for strings
    - Look for vaginal discharge or signs of infection.

At the regular checkups:

- Inquire about side effects, complications and problems.
- Answer questions and address concerns.
- Remind her of the date, month and year the IUCD needs to be removed/replaced.
- Perform pelvic examination to check for strings and look for vaginal discharge or infections.

Unusual Situations

What to do if the IUCD is expelled

- Advice client to return immediately to the clinic to have another IUCD inserted. She should use another contraceptive method until the IUCD is replaced.
- Since most expulsions occur during menstruation, the IUCD user should check menstrual pads, or tampons, as well as the toilet or latrine during menstrual periods.
- If the client does not want to continue using IUCD. Help her choose another method.

Missing strings

- Ask client:
    - When she last felt the strings.
    - If she saw the IUCD coming out.
    - When she had her last menstruation.
    - If she has any symptoms of pregnancy
    - If she has used a backup method since the time she noticed the strings were missing.
- Perform speculum examination: gently, check for the strings in the folds of the cervical canal with the forceps as half of the missing IUCD strings can be found in the cervical canal.

If not seen:

- Perform ultrasound (if available) to confirm the presence and position of the IUCD.
- If IUCD is seen intrauterine and was properly positioned, client can continue the method.
- If IUCD is intrauterine but not properly positioned, advice patient to remove it and re-insert another one. If the client does not want to continue using IUCD. Help her choose another method.
- If IUCD could not be seen by ultrasound, or if ultrasound is not available, refer client by **urgent appointment** to the secondary care (gynecologist) for further evaluation.
- Provide the client with a backup method to use in the meantime

Emergency management for problems during IUCD insertion

Vasovagal attack

- An invasive procedure such as IUCD insertion can trigger a vasovagal response.
- All patients should have a documented medical risk assessment before treatment or practical procedures.
- Immediately tip the woman head down with legs raised
- Evidence of training and regular updates in resuscitation is essential for all staff dealing with emergencies arising during insertion
- Drugs required for resuscitation must be available, accessible, clearly labelled, adequately maintained and their location are known to all staff.
- If bradycardia persist, the recommended drugs required for resuscitation are:
    - Adrenaline 1 mg
    - Atropine 500 or 600 mcg IV/IM (two doses) for the treatment of symptomatic bradycardia
    - Oxygen
- Essential resuscitation equipment should be available, accessible, maintained and its location are known to all staff.

Uterine Perforation

- Suspect uterine perforation if:
    - Client complains of sudden significant pain during the insertion procedure.
    - Uterine sound or loaded IUCD inserter tube passes into uterus beyond 9-10cm without fundal resistance being felt.

Management:

- Stop the procedure, remove the IUCD if inserted by gently pulling on the strings. However, if there is resistance to removal; stop the attempt to remove.
- Keep the client under observation for 2 hours.
- Observe for signs of intra-abdominal bleeding (e.g., falling BP, raising pulse, severe abdominal pain, tenderness, guarding, and rigidity).
- Measure BP every 15 minutes.

After 2 hours:

- Ask the client to sit up rapidly from a resting position. If pulse is > 120 beats/minute or client becomes dizzy, refer the patient as emergency for gynecological evaluation and management.
- If the client is feeling well, vitals are stable and no signs of intra-abdominal bleeding, if the IUCD is not removed and perforation is still suspected, refer the client urgently to a gynecologic service (hospital) where ultrasonography can be performed to confirm the IUCD position and carry appropriate management if perforation is confirmed. This will reassure the client and decrease her anxiety.
- Help the client to choose another method.

When to refer the client:

- If intra-abdominal bleeding is suspected.
- Vital signs are not stable.
- Client is still complaining of pain.
- If IUD is not removed and perforation is still suspected.

Removal Procedure

- The Copper T 380 A should be removed/ replaced after 10 years or earlier if client desires.
- To have the IUCD removed, the woman should return to the clinic. She should never try to remove the IUCD herself or ask an untrained person to do it.
- Unless an IUCD is removed for medical reasons or at the client's request, a new IUCD can be inserted immediately after removing the previous one.

Precautions for Removal

- IUCD removal is usually a routine, simple, uncomplicated and minimally painful procedure, provided the clinician is skilled, gentle and careful. For routine removal, if the IUCD has to be replaced, it should be removed during the menstruation when the cervix is naturally softened.
- To avoid breaking the strings, apply gentle, steady traction and remove the IUCD slowly.
- To minimize the risk of infection with IUCD removal, follow the same infection prevention practices.
- Instruments and equipment for removal are the same as for insertion to which an alligator and /or some Bozeman forceps is to be added.
- If removal is not easy (for example, when IUCD strings are missing), refer the woman to an experienced clinician who can use an appropriate removal technique.

Steps for removing IUCD:

Step 1: Tell the client what you are going to do and encourage her to ask questions.

Step 2: Insert a speculum to visualize the cervix and IUCD strings.

Step 3: Thoroughly apply antiseptic solution such as Savlon to the cervix and vagina two or more times.

Step 4: Tell the client that you are now going to remove the IUCD. Ask her to take slow, deep breaths and relax. Inform her that there may be some cramping, which is normal. She should say if she feels pain during the procedure.

Step 5: Using narrow forceps, the provider pulls the IUCD strings slowly and gently until the IUCD comes completely out of the cervix. If the strings break off but the IUCD is still visible, grasp the device with the forceps and remove it

Difficult Removal:

- If the strings are not seen, after ruling out pregnancy, probe gently for them in the cervical canal with sterilized hemostat or other narrow sterilized forceps. If the strings cannot be located in the cervical canal, the uterine cavity may be probed with some sterilized alligator forceps, which can be used to grasp the strings or the IUCD itself.
- If you have partially removed the device but have difficulty in drawing it through the cervical canal, attempt gentle, slow twisting while applying outward traction, as long as the client remains comfortable. If, from your bimanual examination, you believe a sharp angle between the uterus and cervix exists, apply sterilized tenaculum on the cervix and apply gentle traction downwards and outward, while repeating the gentle twisting of the IUCD. Do not use force.
- One common reason for difficult IUCD removal is that the IUCD strings are "missing" that is, they cannot be located in the vagina near the cervix. Usually, the strings have slipped up into the cervical canal, sometimes because they were cut too short at insertion.
- After ruling out pregnancy, the health care provider should use narrow forceps, such as a Bozeman or Alligator forceps to probe the cervical canal and draw out the strings.
- If the strings cannot be located, either they have retracted into the uterine cavity, or the IUCD may have been expelled without the woman's knowledge. A sound can be used to check whether the IUCD is in place. If it is, then attempt to draw out the strings using the Bozeman or Alligator forceps.
- If the strings cannot be retrieved and the client wants the IUCD removed, Alligator forceps or any other type of retrieval instruments may be used. When doing this, the health care provider must be

very careful not to injure the uterus.

- An uncommon reason for missing strings or difficult removal is that the IUCD has partially or completely perforated the uterus or become embedded in the uterine wall. If any of the attempts fail to remove IUCD the patient should undergo X- ray/ultrasound and be referred to an obstetrician/gynecologist.

Step 6: Insert a new IUCD if client wishes and conditions are appropriate.

Only a trained health care provider should attempt to remove an IUCD using these instruments; in case of non-availability, refer the client for removal at appropriate healthcare facility

Management of side effects and complications related to IUCD

Table 21: The main side effects associated with IUCD and its management

Problem	Action/Management
Heavy or prolonged bleeding (twice as much as usual or longer than 8 days)	• Do pregnancy test • Do pelvic bimanual examination to rule out incomplete abortion or any other abnormality • Perform Hb test. • **If pregnancy, incomplete abortion is suspected,** refer client to the secondary care as an emergency for further evaluation and management. • **If pregnancy is ruled out**: Reassure her that it is generally not harmful and usually becomes less or stops after the first several months of use. • Give iron supplement to treat/prevent anemia. • For short-term relieve, patient can be given ibuprofen 400 mg 3 times per day (after meals), or tranexamic acid, beginning when heavy bleeding starts.
Irregular bleeding (spotting or light bleeding at unexpected times that bothers the client)	• Reassure client that this is common and not harmful • Recommend a 5-day course of mefenamic acid (500 mg 2 times per day after meals) **OR** • 400 mg ibuprofen 2 times daily for 5 days, beginning when irregular bleeding starts
Amenorrhea	• Ask client about: LMP (last menstrual period)? When did she last feel the strings? If she has any symptoms of pregnancy? If she is breast feeding? • Perform pregnancy test. • If pregnancy test is positive: - Explain that an IUCD in the uterus during pregnancy increases the risk of preterm delivery or miscarriage, including septic miscarriage, which can be life threatening. - Advise her that it is best to remove the IUCD, although the removal procedure itself involves a small risk of miscarriage. - If client agrees to remove and pregnancy is < 13 weeks and strings are visible, gently remove the IUCD. - If client does not want IUCD to be removed, refer her to the secondary care by an early appointment for evaluation and plan of management. - Explain that she should attend the clinic immediately if she developed any signs of miscarriage or septic miscarriage (vaginal bleeding, cramping, pain, abnormal vaginal discharge, fever). • If pregnancy test is negative, reassure the client.

Problem	Action/Management
Cramping and mild pain	• She can expect cramping and pain in first 1–2 days after insertion • Reassure client that this is common in first 3–6 months, not harmful, usually decreases over time • Suggest ibuprofen, other pain reliever (not aspirin if she also has heavy bleeding) • If cramping continues and/or occurs outside of menstruation, evaluate for partial expulsion or perforation, treat or refer • If cramping is severe but no underlying condition, discuss removing the IUCD
Possible anemia	• Evaluate the client. • Provide iron tablets if possible. • Encourage to eat foods containing iron
Partner can feel IUCD strings during sex	• Explain that this happens sometimes when strings are cut too short. • If her husband finds the strings bothersome, describe and discuss this option: • Strings can be cut even shorter, so they are not coming out of the cervical canal. Her husband will not feel the strings, but it will make the removal procedure somewhat more difficult (may require a specially trained provider)
Severe pain in lower abdomen	• Ask about signs and symptoms of pelvic inflammatory disease (unusual vaginal discharge, fever or chills, pain during sex or urination, post coital bleeding or bleeding between monthly cycles, nausea and vomiting). • Rule out ectopic pregnancy or other causes of acute abdomen. • Do abdominal and pelvic examinations • Perform pregnancy test. • If PID is suspected, immediately refer to secondary care for treatment with appropriate antibiotics • There is no need to remove the IUCD if she wants to continue using it. • If she wants it removed, take it out after starting antibiotic treatment.
If side effects persist and are unacceptable to the client, help her choose another method If irregular/heavy bleeding continues or starts after several months of normal or no monthly bleeding, or if bleeding suggestive of other underlying conditions unrelated to method use, refer the woman to the secondary care (gynecologist) by early appointment for further evaluation and management.	

Emergency Contraception use of Copper IUCD

- Can be inserted within 120 hours (5 days) of unprotected intercourse.
- Provides ongoing contraception after emergency use.

Correcting misunderstanding about Copper IUCD:

- By itself, IUCD does not cause PID and does not increase the risk of contracting STIs including HIV.
- Does not increase the risk of miscarriage after the IUCD is removed.
- Does not cause infertility.
- Does not move to the heart and brain or any other part of the body.
- Does not cause discomfort or pain for the woman during sex.
- There is no rest period required before another IUCD is inserted.
- Substantially reduce the risk of ectopic pregnancy.
- Women not desiring to check thread still can have IUCD

2.4.6 Barrier methods of contraception: Condoms

There are different types of barrier methods of contraception: Male condoms (latex, non-latex and deproteinised latex varieties), Female condoms (nitrile or latex), and Diaphragms (latex, silicone), Cervical cap (silicone). This section will focus only on **Male condoms** that are provided by Ministry of Heath

What are Male Condoms?

It is a sheath made of thin latex rubber that fits over a man's erect penis. MOH is providing 52 MM Non-colored, made of latex condoms. Male condoms are effective barrier method that can be used for both preventions of pregnancy and protection against HIV and other sexually transmitted infections (STIs).

Effectiveness:

- Male condoms are 98% effective at preventing pregnancy but only when used consistently and correctly.
    - With perfect use (i.e. correct and consistent), the failure rates of male condoms are 2%
    - With typical use (which includes incorrect and inconsistent use) the failure rates are 18%
- Pregnancy rates are similar for latex and non-latex condoms
- Even when condoms break or slip, the risk of pregnancy may be reduced in comparison to no method.
- Correct and consistent use of condoms significantly reduces the risk of HIV infection in men and women. When used correctly with every act of sex, condoms prevent 80 to 95% HIV infections that would have occurred without condoms

Factors affecting the efficacy of condoms

Many factors other than correct and consistent condom use may influence the efficacy of condoms in the prevention of pregnancy such as:

- Lubricants: Adding lubricant to the inside of condoms or to the outside of the penis before using condoms is associated with an increased risk of slippage.
- Size, shape and thickness of barrier methods: Ill-fitting condoms can be associated with breakage and incomplete use. Individuals should be informed that different shapes and sizes of condoms are available.
- Knowledge/familiarity with the method: Incorrect condom use can be associated with an increased likelihood of condom breakage. Increasing familiarity helps to reduce method error.
- Background fertility, coital frequency and EC use when condoms fail.

Mechanism of action

Works by forming a barrier that keeps sperm out of the vagina, preventing pregnancy.

Indications

- Men who want to participate actively in birth spacing and family planning
- Couples needing a temporary method while waiting for a long-term method (IUCD, Implant, Sterilization).
- Couples who want a backup method to support a primary method.
- Breast feeding mothers in need of contraception.
- Couples who have intercourse infrequently.
- Those at risk of STIs including HIV/ AIDS.

Advantages

- Effective immediately
- Inexpensive
- Safe and simple to use
- No method related health risks and no hormonal side effects
- Involves male in BS process
- Good back up method
- Provides protection against STIs, HBV and HIV/AIDS and conditions caused by STIs, e.g. PID and cervical cancer.

Disadvantages

- Less effective than many other methods of contraception
- User dependent, requiring continuous motivation of male.
- Risk of failure due to condom slippage or breakage.
- Interferes with sexual pleasure.
- Not suitable for high-risk pregnancy clients.
- Latex condoms can be damaged by oil-based lubricants, heat, humidity or light. It requires appropriate storage.
- Requires proper disposal

Side Effects

Allergic reaction to latex (among people with latex allergy).

Method provision and instructions for use

When to start:

Any time the client wants.

How to Use

Explain the five basic steps of using a male condom

- Use a new condom for each act of sex. (Check the condom package, do not use if torn or damaged, avoid using a condom past the expiration date.)
- Before any genital contact, place the condom on the tip of the erect penis with the rolled side out.
- Unroll the condom all the way to the base of erect penis.
- Immediately after ejaculation, hold the rim of the condom in place and withdraw the penis while it is still erect.
- Dispose the used condom safely.
- If breakage or slipping occur, contact local clinic for emergency contraception

Instructions "not to do"

The following 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 the lubricants with an oil base because they 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
- Do not use a condom that feels brittle, dried out, or very sticky.
- Do not reuse condoms.
- Do not have dried sex.

Provision

- The woman will be given 20 condoms per month if she uses it as a basic contraceptive method.
- In case if she is using it as a backup method, it will be dispensed as required.
- Women should be advised to use a water or silicone-based lubricant. Oil-based lubricants should not be used with latex condoms.

Storage

- Keep in dark, air-conditioned place, away from sunlight.
- Recommended temperature is not more than 26°C, humidity not higher than 90 %.

Follow Up

- Remind client about the instructions/steps of method use.
- Re-supply (20 condoms per month).
- Do pregnancy test if client did not get her period.
- If the client is not satisfied with the method or has unacceptable side effects, help her to choose another method.

Method specific counselling for acceptors of condoms

Pre-Method provision counseling

- How does it prevent pregnancy?
- What are advantages and disadvantages?
- Likely side effects.
- Correct any misunderstanding about the method.
- Post-Method Provision Counseling
- Importance of following instructions/steps of use correctly.
- Importance of using the method with every sexual act.
- Assure the client that she can come back any time if she has problems, questions, or she thinks she might be pregnant.

Follow Up Counseling

- Check if the client is satisfied with the method.
- Ask if she has questions or anything to discuss.
- Check if the client is using the method correctly and with every sexual act.
- Provide any information or help that she needs.

Management of problems /side effects related to condom use

Table 22: Management of problems associated with Condom use

Problem	Action
Condom breaks, slips off the penis, or is not used	• Provide patient with emergency contraceptives to prevent pregnancy. • Remind client about the instruction/steps of method use. • Ask if any lubricants are being used. The wrong lubricant or too little lubricant can increase breakage. • Ask when the man withdraws his penis. Waiting too long to withdraw, when the erection begins to subside, can increase the chance of slips
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)	• Suggest trying another brand of condoms. • Suggest putting lubricant or water on the condom to reduce rubbing that may cause irritation. • If symptoms persist, assess for possible vaginal infection and manage accordingly. • If there is no infection and irritation continues, the client may have an allergy to latex, Help her to choose another method

Table 23: New Problems That May Require Switching Methods

Problem	Action
Woman is using miconazole or econazole (for treatment of vaginal infections)	• A woman should not rely on latex condoms during vaginal use of miconazole or econazole. They can damage latex. (Oral treatment will not harm condoms.) • Plastic male condoms or female condom can be used or to use other contraceptive method, or abstain from sex until treatment is completed.
Severe allergic reaction to condom (hives or rash over much of body, dizziness, difficulty breathing, or loss of consciousness during or after condom use).	• Treat severe allergic reaction to latex as it could lead to life-threatening anaphylactic shock, • Help the client to choose another method

Correcting misunderstandings about Condoms

- Does not make man sterile, impotent, or weak.
- Does not decrease men's sex drive.
- Dose not get lost in the women's body.
- Does not cause illness in men because sperm "backs up".

Considerations Following Barrier Method Failure

- Emergency contraception (EC): Health professionals should discuss the potential need for EC with couples who use condoms. EC may be indicated in case of Condom splitting/breaking slippage
- Testing for STIs: Individuals with concerns about STIs, HIV or other blood-borne viruses (BBV), whether symptomatic or not, should have a risk assessment and an appropriate medical and sexual history taken. The minimum tests (often called an STI screen) are those for chlamydia, gonorrhea, syphilis and HIV.
- Post -exposure prophylaxis: If exposure to HIV is likely, refer for treatment with antiretroviral medications (post-exposure prophylaxis), where available, can help reduce HIV transmission.

2.4.7 Emergency Contraception

What is Emergency Contraception (EC)?

Emergency contraception (EC) refers to methods used to prevent pregnancy after unprotected sexual intercourse or contraceptive failure (e.g., condom breakage, missed pills) or sexual assaults. It is not a regular contraceptive method but it is used to reduce the risk of unintended pregnancy if taken within Five days after unprotected sexual intercourse (UPSI). The sooner they are taken, the better they prevent pregnancy.

Methods of emergency contraception

Table 24: Methods of Emergency Contraception

Method	Class	Recommended dose/use
POP	• Levonorgestrel (LNG-EC)	• 1.5 mg single oral dose
	• Noregestrel pills	• 3 mg in a single dose
COC	• Estrogen and levonorgestrel pills: 0.1 mg ethinyl estradiol + 0.5 mg levonorgestrel. • Estrogen and norgestrel pills: 0.1 mg ethinyl estradiol + 1 mg norgestrel. • Estrogen and norethindrone pills; 0.1 mg ethinyl estradiol + 2 mg norethindrone.	Four COC tablet is a single dose then repeat the same dose after 12 hours.
Copper intrauterine device (Cu-IUCD)	• Intrauterine contraceptive method IUCD	• Retaine until pregnancy excluded (e.g. onset of next menstrual period) or can be kept for ongoing contraception

Effectiveness

- If 100 women each had sex once during the second or third week of menstrual cycle without using contraception, 8 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.
- Cu-IUD is the most effective method of EC.

Factors that alter the effectiveness of EC

- **Weight/body mass index (BMI):**
  - Effectiveness of the Cu-IUCD is not known to be affected by weight or BMI.
  - Higher weight or BMI could reduce the effectiveness of oral EC, particularly LNG-EC.

- **Drug interactions**
  - Women using enzyme-inducing drugs should be advised that the effectiveness of LNG-EC could be reduced.
  - Women requiring EC who are using enzyme-inducing drugs should be offered a Cu-IUCD if appropriate.

Mechanism of action

- Prevent or delay ovulation (pills)
- Prevent fertilization or prevent implantation (IUCD)
- They do not work if a woman is already pregnant

Indications

ECPs can be used any time a woman is worried that she might become pregnant, for example:

- Sex was forced or (rape) coerced.
- Incorrect method uses:
  - Condom was used incorrectly, slipped or broke.
  - Women has missed three or more COC pills or has started a new pack three or more days late.
  - Woman is more than two weeks late for her progestin injection.
- Couple using natural/traditional method have failed to use it correctly:
  - Incorrect use of fertility awareness method.
  - Man failed to withdraw, as intended before ejaculation.

Advantages

- Offers a second chance at preventing pregnancy.
- Controlled by the woman.
- Tests and examination are not necessary for using ECP's.
- Because of the short-term nature of their use, it is safe to be used by all women.
- Appropriate for other reasons such as forced sex (violence against women).
- Reduce seeking out illegal abortion in case of contraceptive errors or if contraception is not used.

Contraindications /restrictions to use

Contraindications to pills and Cu-IUD for EC are the same as those for routine use.

Side Effects

Some users may experience 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: nausea, abdominal pain, fatigue, headache, breast tenderness, dizziness, vomiting. **Give antiemetic:** Metoclopramide 10 mg can be given orally, 30 minutes before taking the medication.
- If vomiting occurs within 3 hours of taking oral EC, a repeat dose should be given.

Method Provision and instructions for method use

- When to use
- Any time within five- days after unprotected sex
- Before prescribing ECPs, it is important to be sure that woman is not pregnant as she might have become pregnant in previous month. ECPs should not be prescribed if pregnancy is suspected.

Method Specific Counselling

Pre-method counseling explain to women:

- Types of ECPs available.
- ECP's are like natural hormone Progestin or estrogen in woman's body.
- How it prevents pregnancy.
- They have to be taken within five days of unprotected sex.
- They do not work if pregnancy has already occurred.
- Describe the most common side effects.
- They do not protect against any future sex even on the next day; hence a regular method of contraception has to be used by woman.

Post-method counseling

- How to take the method prescribed?
- Explain to her that emergency contraceptives:

- Will not protect from pregnancy for any future sexual act.
- Are not to be used as routine method of contraception.

- Encourage women to use a regular method of contraception.
- Assure her that she can come at any time if she has any complains, questions if she thinks she is pregnant.
- Pregnancy testing is advised if, after EC, the next menstrual period is delayed by more than 7 days, is lighter than usual or is associated with abdominal pain that is not typical of the woman's usual dysmenorrhea

Unusual situations

Can oral EC be used more than once in a cycle?

- If a woman has already taken EC once or more in a cycle, EC providers can offer her EC again after further UPSI in the same cycle. Remember:

- Emergency contraceptives are not to be used as routine method of contraception.
- At all times, women are to be told not to practice unprotected sex and use regular safe contraceptive method for birth spacing.

Correcting Misunderstandings

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 woman's health
- Do not make women infertile
- Can be used more than once in a woman's cycle

2.5 Genital Tract Infections

Definition:

- Infection caused by micro-organisms, which are usually transmitted through sexual contacts. The causative organisms could be bacteria, viruses, protozoa, fungi, or ecto- parasites.
- All potential IUCD users should be evaluated for genital tract infections as a part of client assessment by history, pelvic examination and if necessary by laboratory investigations.
- Appropriate management of infections is crucial to avoid morbidity caused during acute stage and long-term consequence of pelvic inflammatory disease such as infertility, ectopic pregnancy and its link with cervical cancer.

Education and Counselling

Education

- Educating couples of reproductive age on sexually transmitted diseases is very crucial in prevention of disease and consequent complications and long-term morbidity.
- Couples should receive education on the types of sexually transmitted diseases, their mode of infection and ways and means to prevent them.

Counselling

- Counseling should be performed for all patients with signs and symptoms suggestive of STI and should focus on the following (4Cs):
  - Compliance with treatment.
  - Use of Condom.
  - Importance of treatment of partner (Contact).
  - Counseling for STI prevention, HIV testing; educate and reassure patient.

1- Vaginal Discharge

History:

- Ask about duration, frequency, abdominal pain, dyspareunia, dysuria, associated itching.
- Ask about history of similar problem with the husband.
- Ask about sexual history, perform risk assessment for STI: extra-marital sexual relationship, multiple sexual partners, use of condom.

Examination:

- Abdominal examination: palpate for lower abdominal tenderness.
- Speculum examination: inspect for vulvovaginal erythema, color and odor of the discharge.

A. Candidiasis:

Suspect Candidiasis if history and examination shows:

- Thick, cheesy white discharge that adheres to the wall, no odor, vulvar and vaginal erythema.
- History of vaginal itching.
- No abdominal pain.
- Low risk for STI.

Management:

- Clotrimazole cream 1% plus Clotrimazole 500 mg pessary intravaginally once, OR Fluconazole 150 mg tablet orally stat.
- Alternative regimen: Nystatin 100,000 IU intravaginally daily for 14 days.
- Ask patient to review back if no improvement.

B. Bacterial Vaginosis (BV):

Suspect Bacterial Vaginosis (BV) if history and examination shows:

- Thin, off-white or grey discharge, unpleasant "fishy" odor, increasing after sexual intercourse, normal appearance of vulva and vagina.
- No abdominal pain.
- Low risk for STI.

Management:

- Perform vaginal swab.
- Metronidazole 400 mg bidx5days
- Ask patient to review back if no improvement.
- If symptoms persist, consider referral to Gynecology

C. Trichomonas (TM)

Suspect Trichomonas if history and examination shows:

- Copious, malodorous, yellow-green discharge, pruritus, dysuria, vulvar and vaginal edema and erythematic cervix.
- No abdominal pain.

Management:

- Treat with Metronidazole 400 mg bidx5days
- If at risk of STI

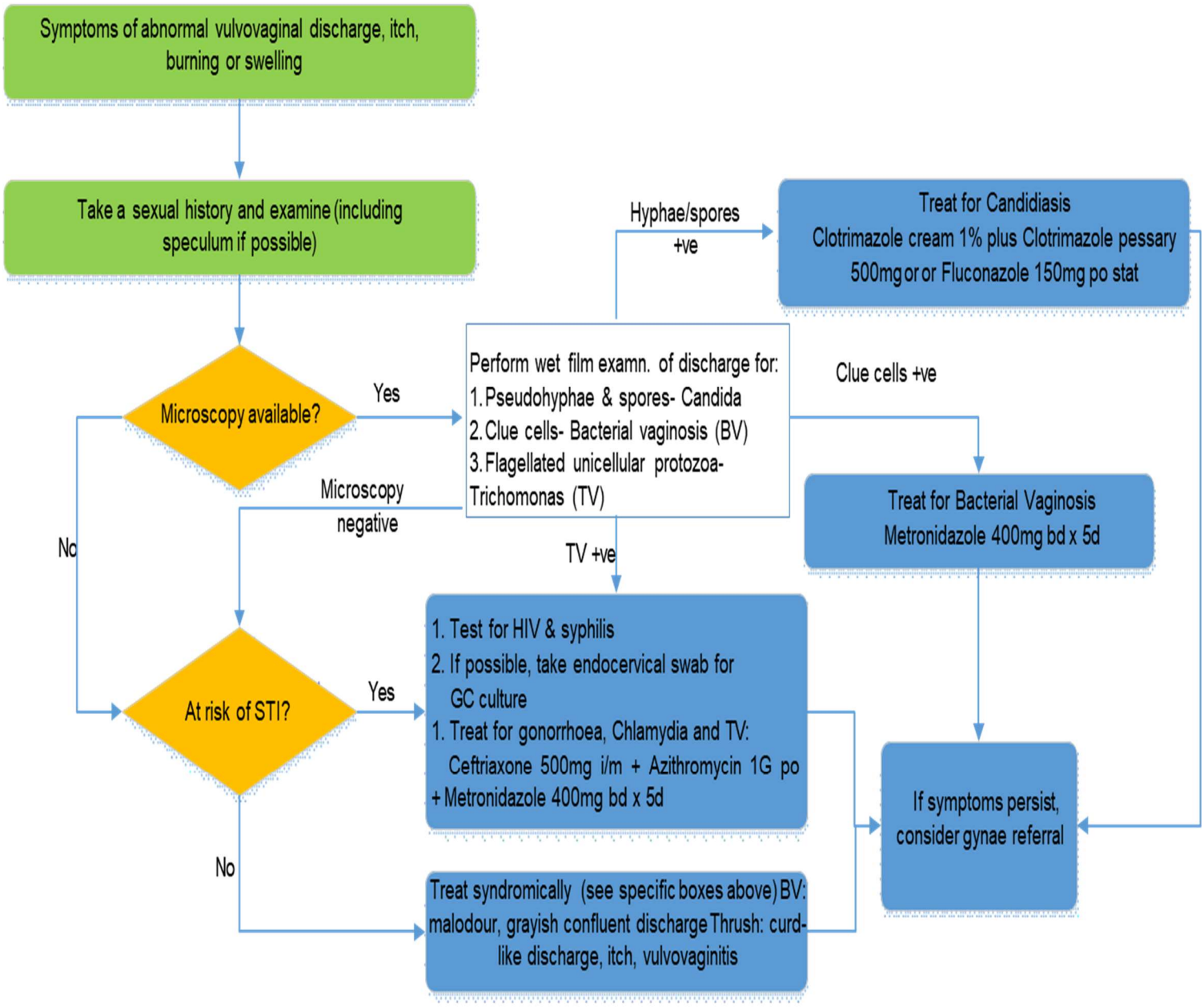
- Test for HIV and Syphilis
- If possible, take endocervical swap for Gonorrhea& chlamydia culture
- Treat for Gonorrhea& chlamydia (ceftriaxone 500 mg IM+ azithromycin 1g PO)

Table 25: Signs and Symptoms of Vaginal Infections

Signs/symptoms	Candida	Bacterial Vaginosis (BV)	Trichomonas vaginalis (TV)
Discharge	Thick white	Thin	Scanty to profuse
Odour	Non offensive	Offensive/Fishy	Offensive
Itch	Vulval itch	None	Vulval itch
Other possible symptoms	Soreness Superficial dyspareunia dysuria	Copious discharge	Dysuria Lower abdominal pain
Visible signs	Normal findings Vulval erythema, edema, fissuring Satellite lesions	Discharge coating the vagina and vestibule No vulval inflammation	Frothy yellow discharge Vulvitis Vaginitis Cervicitis Strawberry cervix
Vaginal PH	≤ 4.5	>4.5	< 4.5

Algorithm 5: Flow chart summarizing the management of vaginal discharge

**adopted from MOH- STI guideline 2021*



*Take a Sexual History to identify significant STI risk factors
Age <25 years, Single, Sex abroad, Man who has sex with men (MSM); Commercial sex worker (CSW) or client of CSW
Recent unprotected penetrative sex (oral, vaginal, anal) with a new partner; unprotected sex with multiple partners in past 3m
Patient has additional genitourinary symptoms or has a previous history of STI Partner also has genitourinary symptoms or has a diagnosed STI

D. Gonorrhea/Chlamydia

Suspect Gonorrhea/Chlamydia if history and examination shows:

- Purulent vaginal discharge, red friable cervix, inflamed urethra, dysuria.
- No abdominal pain.
- High risk for STI.

Management:

- Perform vaginal swab for GC culture & sensitivities.
- Test for HIV and syphilis.
- Treat for both gonorrhea and chlamydia:

- First line: Ceftriaxone 500mg i/m stat & Azithromycin 1G po stat
- Second line: Ceftriaxone 500mg i/m & Doxycycline 100mg bd x 1w
- Third line: Azithromycin 2G po stat

- Urgent referral to Dermatology/Gynecology if drugs are not available
- Educate on risk reduction
- Offer condoms, promote safer sex
- Notify partner/s to get tested & treated
- Document and Record
- Advise return if symptoms persist or new problems arise

E. Pelvic Inflammatory Disease (PID)

Suspect PID if history and examination shows:

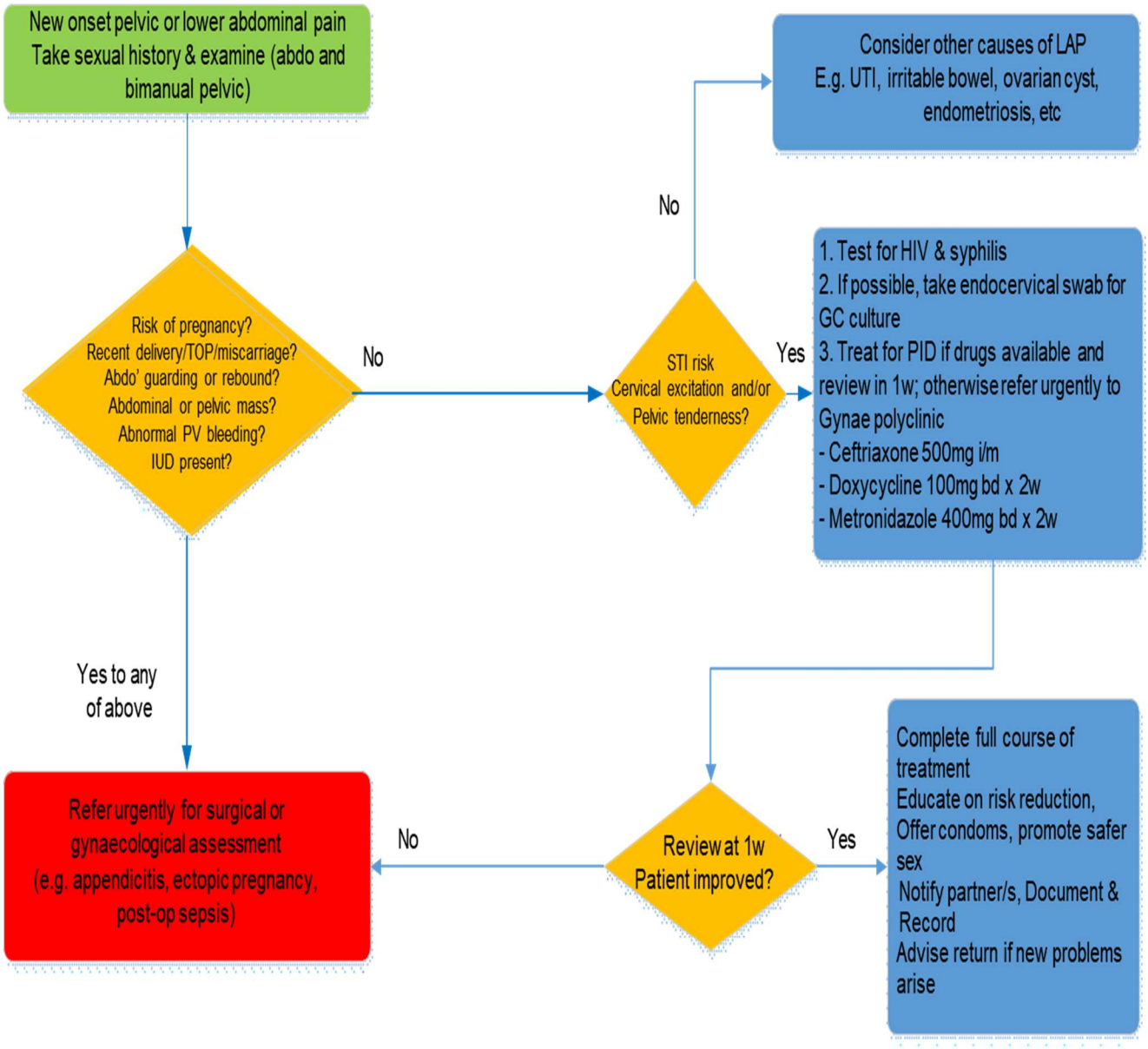
- Fever, Purulent vaginal/cervical discharge
- Abdominal pain/tenderness.

Management:

- Refer to (Algorithm 6)

Algorithm 6: Flow chart summarizing the management of Pelvic Inflammatory Disease

**adopted from MOH- STI guideline 2021*



***Take a Sexual History to identify significant STI risk factors**

Age <25 years, Single, Sex abroad, Man who has sex with men (MSM); Commercial sex worker (CSW) or client of CSW

Recent unprotected penetrative sex (oral, vaginal, anal) with a new partner; unprotected sex with multiple partners in past 3m

Patient has additional genitourinary symptoms or has a previous history of STI Partner also has genitourinary symptoms or has a diagnosed STI

2- Genital Ulcers:

History:

- Ask about duration, frequency.
- Ask if painful ulcers or not (painful ulcer is more with genital herpes)
- History of similar problem with the husband.
- History of vaginal discharge.
- Perform risk assessment for STI: extra-marital sexual relationship, multiple sexual partners, use of condom.

Examination:

- Check temperature.
- Lymph nodes.
- Inspect for the type of lesion, erythema. Tenderness.

Diagnosis & Management:

A. Herpes Zoster

- Suspect Herpes Zoster if patient c/o malaise, fever.
- Examination shows multiple, painful, vesicular, shallow ulcers, tender inguinal lymphadenopathy.
- History of vaginal discharge.

Management:

- Start Acyclovir 400 mg 3 times a day for five days and extended to 10 days if necessary.
- Test for HIV and Syphilis if not previously tested.
- Advice patient to avoid sexual contact while lesions are present.
- Provide counseling (4Cs).
- Ask patient to review back if no improvement.

B. Chancroid

- Suspect Chancroid if examination showed: painful "dirty" well circumscribed erythematous ulcers covered with slough, surrounded by erythematous halo, bleed easily and are located anywhere on the external genitalia.
- If examination showed: enlarged lymph node (bubo) in the groin.

Management:

- Azithromycin 1 G stat weekly x3 weeks.
- Provide counseling (4Cs).
- Ask patient to review back if no improvement.

C. Syphilis

- Suspect Syphilis if examination showed painless ulcer on the external genitalia.

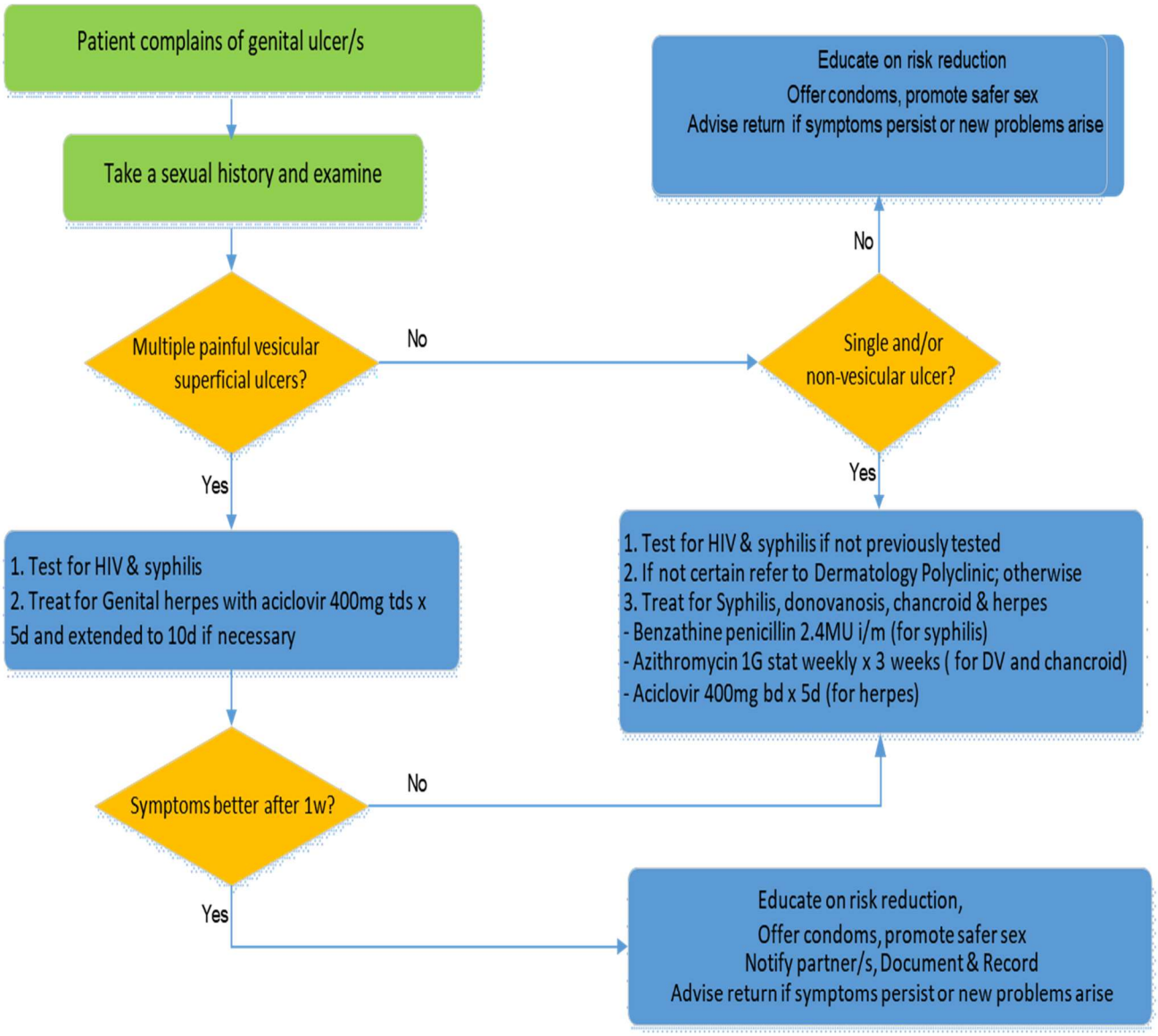
Management:

- Perform RPR and TPHA.
- Benzathine Penicillin 2.4 million IU IM once (due to large volume it is recommended to divide the dose and give into 2 injection sites).

  Note: If patient is allergic to penicillin, refer her to the secondary care (dermatologist).
- Provide counseling (4Cs).
- Ask patient to review back if no improvement.

Algorithm 7: Flow chart summarizing the management of Acute genital ulceration

**adopted from MOH- STI guideline 2021*



***Take a Sexual History to identify significant STI risk factors**

Age <25 years, Single, Sex abroad, Man who has sex with men (MSM); Commercial sex worker (CSW) or client of CSW

Recent unprotected penetrative sex (oral, vaginal, anal) with a new partner; unprotected sex with multiple partners in past 3m

Patient has additional genitourinary symptoms or has a previous history of STI Partner also has genitourinary symptoms or has a diagnosed STI

3- Inguinal Swelling

History:

- Ask about duration, frequency.
- History of similar problem with the husband.
- History of vaginal discharge.
- Perform risk assessment for STI: extra-marital sexual relationship, multiple sexual partners, use of condom.

Examination:

- Check temperature.
- Lymph nodes.
- Tenderness.
- Inspect for the type of lesion, erythema

A. Lymphogranuloma venereum (LGV)

- Suspect (LGV) if enlarged lymph node (bubo) in the groin.
- Small painless eruptions (like pimples) on the vulva.

Management:

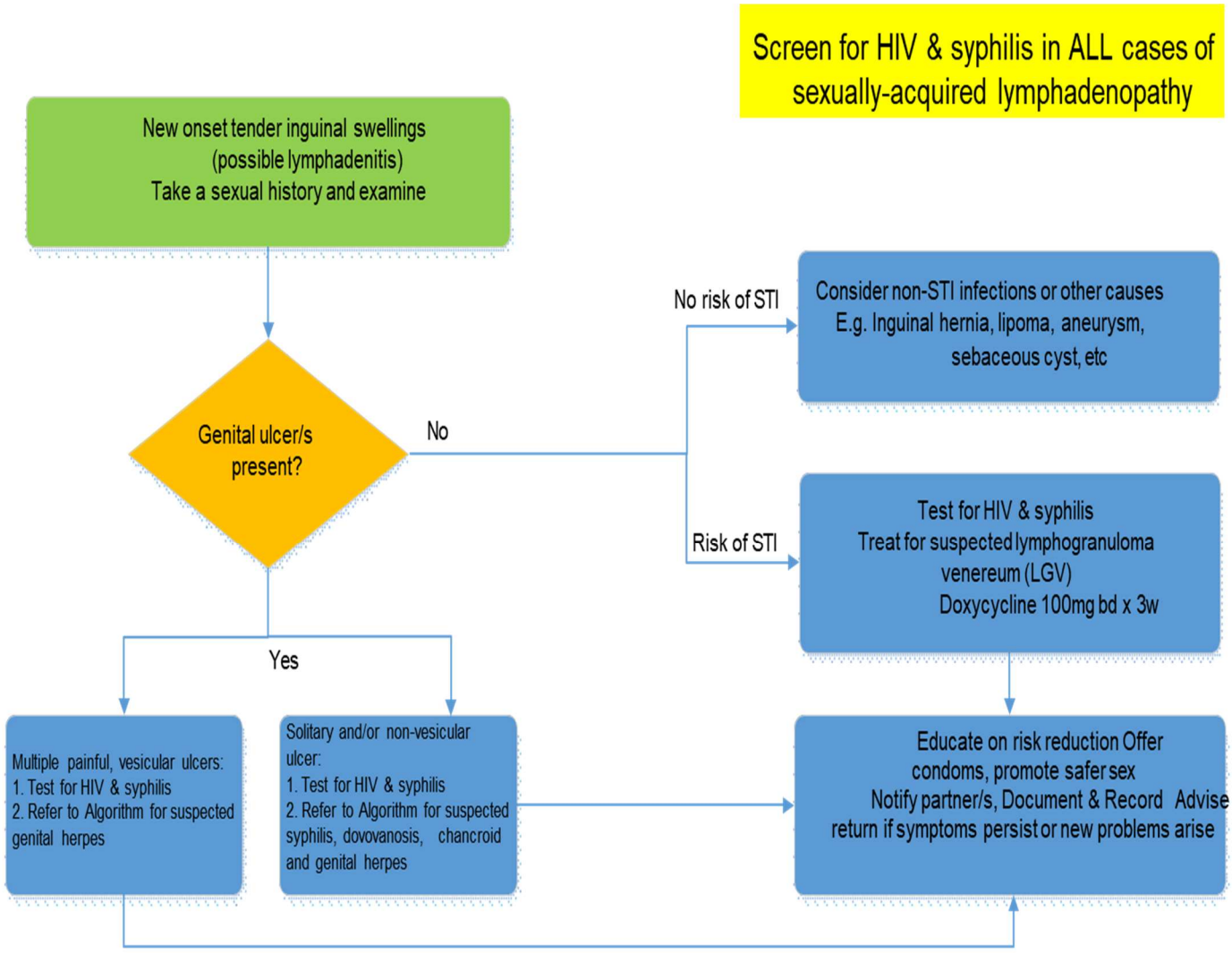
- Doxycycline 100 mg BID for 3 weeks
- Screen for HIV& Syphilis.

B. Chancroid

- Suspect Chancroid if examination showed: painful "dirty" well circumscribed erythematous ulcers covered with slough, surrounded by erythematous halo, bleed easily and are located anywhere on the external genitalia.
- Enlarged lymph node (bubo) in the groin.

Algorithm 8: Flow chart summarizing the management of Inguinal lymphadenitis (Bubo)

**adopted from MOH- STI guideline 2021*



***Take a Sexual History to identify significant STI risk factors**

Age <25 years, Single, Sex abroad, Man who has sex with men (MSM); Commercial sex worker (CSW) or client of CSW
Recent unprotected penetrative sex (oral, vaginal, anal) with a new partner; unprotected sex with multiple partners in past 3m
Patient has additional genitourinary symptoms or has a previous history of STI Partner also has genitourinary symptoms or has a diagnosed STI

4- Genital Warts

Single or multiple soft, painless, “cauliflower” growth which appears around the anus, vulvo-vaginal area, urethra and perineum.

Management:

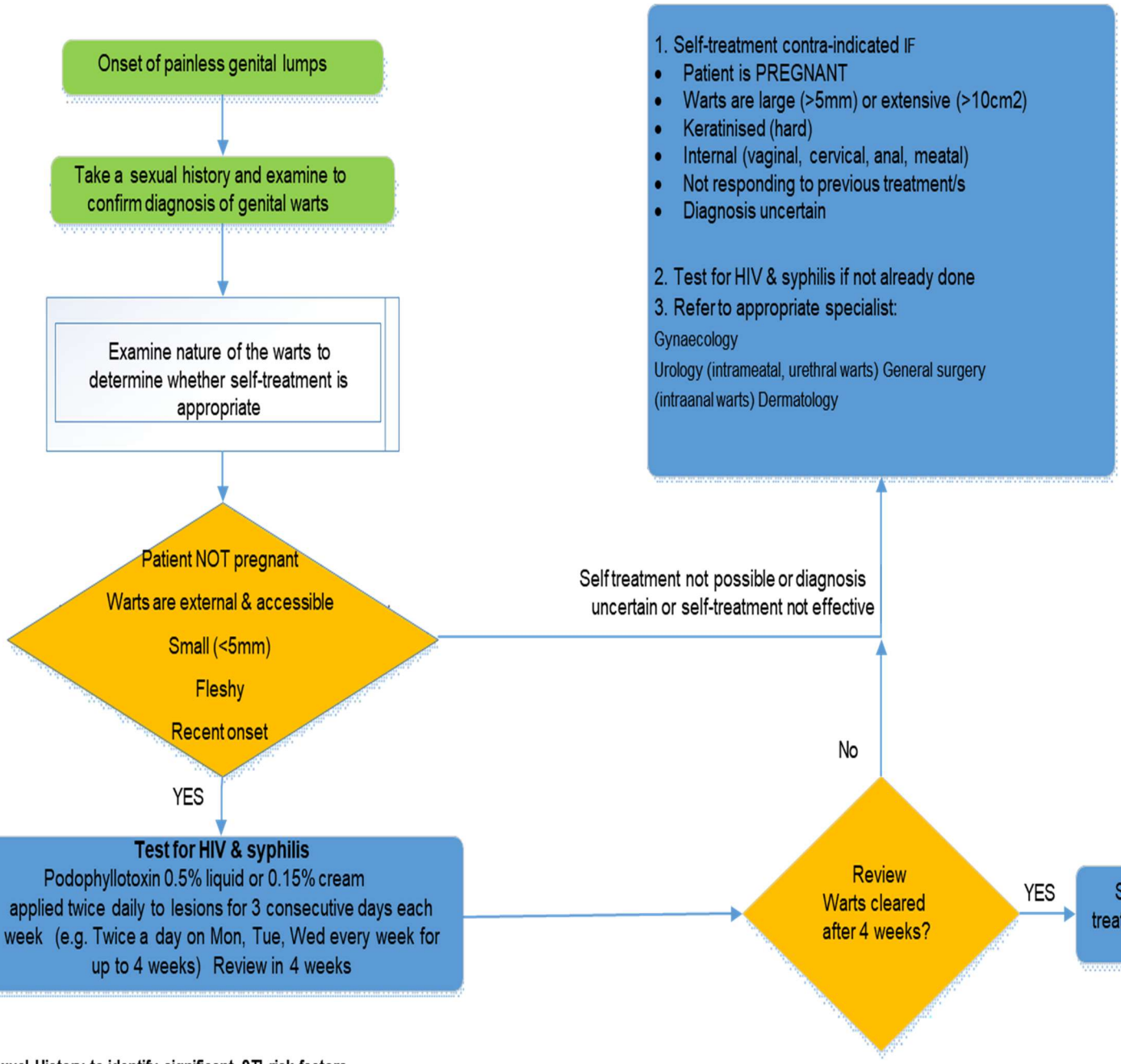
- Test for HIV & Syphilis
- Perform PAP smear.
- Refer to the dermatologist for cryotherapy.
- Provide counseling (4Cs).

Remember, always refer the patient to the appropriate specialist if:

- No improvement with the treatment given providing patient was compliant.
- Uncertainty of diagnosis

Algorithm 9: Flow chart summarizing the management of Genital Warts

**adopted from MOH- STI guideline 2021*



***Take a Sexual History to identify significant STI risk factors**

Age <25 years, Single, Sex abroad, Man who has sex with men (MSM); Commercial sex worker (CSW) or client of CSW

Recent unprotected penetrative sex (oral, vaginal, anal) with a new partner; unprotected sex with multiple partners in past 3m

Patient has additional genitourinary symptoms or has a previous history of STI Partner also has genitourinary symptoms or has a diagnosed STI

Treatment of Sexual Partners

The following Table (26) is showing the recommended treatment for the sexual partners in some of the Genital Tract Infections in female and male patients.

Table 26: Treatment of Sexual Partners

Female patient:	**Partner treatment: (and HIV & syphilis tests)**
Vaginal discharge • Low risk of STI? • High risk of STI?	 No treatment necessary (i.e. if treating a woman for BV or thrush) Ceftriaxone 500mg i/m & doxycycline 100mg bd x 7d & metronidazole 400mg bd x 5d
Lower abdominal pain **(PID)**	Ceftriaxone 500mg i/m & doxycycline 100mg bd x 7d
Genital ulceration • Probable herpes • Other cause	 If partner has ACTIVE herpes, aciclovir 400mg tds x 5d Benzathine penicillin 2.4MU i/m plus azithromycin 1G stat
Genital warts	Treat if partner also has genital warts.
Inguinal bubo (LGV)	Doxycycline 100mg tds x 3w
Male patient:	**Partner treatment: (and HIV & syphilis tests)**
Urethral discharge	Ceftriaxone 500mg i/m & azithromycin 1G stat
Scrotal pain (epididymo-orchitis)	Ceftriaxone 500mg i/m & azithromycin 1G stat
Genital ulceration • Probable herpes • Other cause	 If partner has ACTIVE herpes, aciclovir 400mg tds x 5d Benzathine penicillin 2.4MU i/m plus azithromycin 1G stat
Genital warts	Treat if partner also has genital warts. (Cryotherapy if pregnant)
Inguinal bubo (LGV)	Doxycycline 100mg tds x 3w ((azithromycin 1G weekly x 3w if partner is pregnant)

CHAPTER THREE

3.1 Prerequisites to implement the guideline

- Availability of waiting area, education area, counseling room (private), examination and service provision room.
- Availability of all recommended birth spacing methods and insertion / removal sets.
- The stock of contraceptives should be stored and dispended by the Pharmacy, don't store or dispend the birth spacing methods in the Birth Spacing clinic
- Sterilization of instruments should be done in the sterilization unit.
- Availability of educational materials about Birth Spacing (QR code can be used to share the health education materials with the clients)
- Training of the health care providers on how to use the guideline
- Training of the health care providers on how to insert /remove IUCD and implants.
- Training of the health care providers about counselling skills on birth spacing

3.2 Human resources needed in Birth Spacing clinic

- Trained doctors
- Trained Nurses /Midwives
- Health Educator
- Pharmacist

3.3 Responsibilities

A. Department of Women and Child Health, Ministry of Health

- Update the Birth Spacing Guideline as per latest evidence
- Ensure that the guideline is disseminated to the healthcare institutions
- Share the guideline with the non-MOH institutions
- Conduct national training on the updated guideline
- Ensure that guideline is implemented
- Develop strategies and policies to strengthen the birth spacing services
- Analyze collected data on birth spacing use
- Monitor and evaluate service provision in all health institutions
- Develop birth spacing communication plan
- Conduct studies on birth spacing

B. Women and Child Health Sections in the governorates

- Ensure that the guideline is disseminated to all healthcare institutions in the governorate
- Conduct training workshops based on the national training on the updated guidelines to the healthcare providers working in the healthcare institutions in the respective governorate.
- Ensure that guideline is implemented in the birth spacing clinics.
- Monitor and evaluate service provision in all healthcare institutions
- Include birth spacing process indicators in the institution's Key performance indicators (KPI)
- Develop data base for birth spacing services
- Conduct annual birth spacing campaigns

C. Directorate General of Information Technology

- Ensure that approved guideline is uploaded in the MOH website/hospital local site and Al Shifa system.
- Ensure that all outdated guidelines are removed from the MOH website/hospital local site and Al Shifa system.
- Update the birth spacing clinic page in Al Shifa system as required

D. Trained doctors

- Review the detailed history of the patient including the previous birth spacing methods use.
- Perform a clinical physical examination for clients at registration including: - systemic examination, breast, cardiovascular, chest, abdominal and pelvic examination.
- Do full assessment based on WHO Medical Eligibility Criteria (MEC)
- Document client information including history, examination and management in Al Shifa
- Provide good and comprehensive counseling to the clients
- Trace blood investigations (shared work with nurses), pregnancy test and HVS if needed.
- Manage side effects/ complications as per the guideline
- Refer all high-risk pregnant women to secondary care as indicated
- Participate in the birth spacing awareness campaigns on birth spacing
- Provide health education and support to all women at reproductive age group

E. Trained Nurses/ Midwife

- Issue birth spacing card (blue card) for women willing to take birth spacing.
- Take detailed medical, surgical and obstetric history
- Conduct risk assessment in every visit with rapid assessment for danger signs
- Check: - weight, height, BMI, Blood pressure (BP)
- Document all above mentioned information in the birth spacing card and at Al shifa system
- Provide proper health education, counselling and support to the clients
- Collect and trace blood investigations
- Refer the women to the doctor for assessment, physical examination
- Refer to health educator during the first visit and as needed
- Participate in the birth spacing awareness campaigns on birth spacing

F. Health educators

- Provide proper health education and support to women
- Develop awareness campaign plan
- Organize and participate in the birth spacing awareness campaigns on birth spacing

G. Directorate General of Medical Supplies

- Maintain continuous supply of all birth spacing methods in all health institutions

H. Directorate General of Private Health Establishments

- Disseminate the guidelines to all private clinics
- Monitor and evaluate birth spacing services in private institutions

I. Department of Statistics and information

- Collect statistics on birth spacing from healthcare institutions providing birth spacing service
- Analyze the collected data
- Publish annual report on birth spacing use.

Document History and Version Control

Document History and Version Control			
01	Initial Release – 1st Edition	Department of Woman and Child Health	1994
02	2nd Edition	Department of Woman and Child Health	
03	3rd Edition –	Department of Woman and Child Health	2012
04	4th Edition	National Center for Woman and Child Health	2025
Written by	Reviewed by	Approved by	
Team of contributors and reviewers for the development of the Child Well Being Guidelines	Team of contributors and reviewers for the development of the Child Well Being Guidelines	Dr. Sami Al Farsi Director General - National Center for Woman and Child Health	

CHAPTER FOUR

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Appendices

Appendix 1: Drug Interactions with COCs

COMMONLY USED OR PRESCRIBED DRUGS	ADVERSE EFFECT	COMMENTS/ RECOMMENDATIONS
Analgesics - acetaminophen (Tylenol, Paracetamol and others	Increased drug excretion, hence decreased analgesic effect.	Monitor pain and prescribe drug in higher dose or chose other drug/s
Antibiotic - Grisofulvin and Rifampicin	Decreased contraceptive effect especially with low dose pill < 35 microgram of ethenyl estradiol (EE)	Chose another method or prescribe high estrogen pill (50 microgram of Ethinyl estradiol) or advice use of condom
Anti-viral drugs Nucleoside transcriptase inhibitors and Ritonovir boosted protease inhibitor)	Decreased or increase the bioavailability of hormonal contraceptives. Hence may alter the safety and effectiveness of both hormonal and anti-viral drugs	Choose non-hormonal method. if COC is the choice then preparation should have minimum 30 microgms of EE and condom should be consistently used
Antidepressants – Elavil, Norpramin, Tofranil and others	Possible increased anti-depressant effect	Use with caution
Anti-hypertensive – Methyl Dopa (Aldomet and other similar drugs)	Possible decreased anti-hypertensive effect	Use COC with caution and use another anti- hypertensive drug
Anti-seizure – Barbiturates (Phenobabitols and others; Carbamazapine (Tegretol); Phenitoin (Dilantin); Primidone (Mysoline), topiramate, oxcarbazepine and lamotrigine (monotherapy)	Decreased contraceptive effect especially with low dos pill. Possibly increased phenytoin effect	Help client choose another method or use higher dose pill (30 mcgm EE pill) or use back up method e.g. condom
Beta-blockers – Inderal, Lopressor, Tenormin and other similar drugs	Possible increase beta blocker effect	Monitor cardio-vascular status

Bronchodilators – Theophylline, Quibron, theor-Dur and others)	Increased Theophylline effect	Monitor for symptoms of Theophylline over dose
Hypoglycemic – Diabenase, Orninase, tolbutamide, tolinase)	Possibly decreased phenitoin effect	Monitor blood glucose levels as for any diabetic patient
Tranquilizers – Benzodizepine (Ativan, Librium, Serax,Tranxene, Valium, Xanas and others)	Possibly decreased or increased tranquilizers effect including psychomotor impairment	Use with caution. Commonly prescribed dosage are unlikely to result significant effects

Appendix 2: Drug Interactions with POPs

COMMONLY USED OR PRESCRIBED DRUGS	ADVERSE EFFECT	COMMENTS /RECOMMENDATIONS
Antibiotic - Rifampicin and rifabutin	Decreased contraceptive effect especially with mini pill POP due to increased metabolisation in the liver	Help client choose non-hormonal or use condom as additional method or use Progestin injectables (DMPA) or high estrogen pill (50 microgram of ethenyl estradiol)
Anti-vrial drugs Non-Nucleoside reverse transcriptase inhibitors and Ritonovir boosted proease inhibitor)	Decreased or increase the bioavailability of hormonal contraceptives. Hence may alterthe safety and effectiveness of both hormonal and anti-viral drugs	Help client choose non-hormonal or use condom as additional method or use Progestin injectables (DMPA) or high estrogen pill (50 microgram of ethenyl estradiol
Anti-seizure – Barbiturates (Phenobabitols and others; Carbamazapine (Tegretal); Phenitoin (Dilantin); Primidone (Mysoline), topiramate and oxcarbzepine	Decreased contraceptive effect especially with POP pill due to increased metabolisation in the liver Possibly increased phenitoin effect	Help client choose non-hormonal or use condom as additional method or use Progestin injectables (DMPA) or high estrogen pill (50 microgram of ethenyl estradiol