Module II

REPRODUCTIVE HEALTH PACKAGE

An Essential Element of Universal Health Coverage

World Health Organization

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REPRODUCTIVE HEALTH PACKAGE

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5.1 REPRODUCTIVE HEALTH AND RIGHTS

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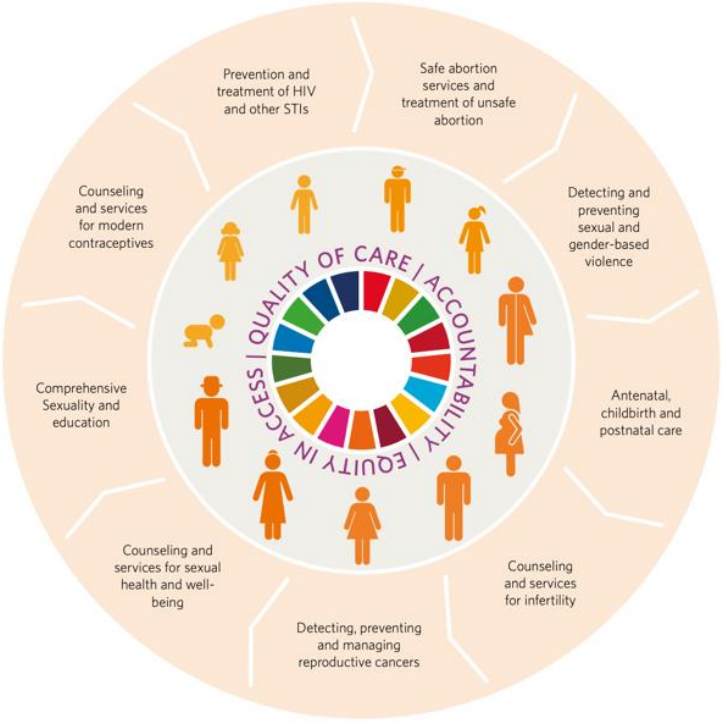
Reproductive health is defined as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and its functions and processes, at all stages of life.”

Good reproductive health implies that people are able to have a satisfying and safe sex life, the capability to reproduce and the freedom to decide if, when, and how often to do so. It includes the rights of men and women to be informed [about] and to have access to safe, effective, affordable, and acceptable methods of family planning of their choice. Men and women should be informed about and have access to safe, effective, affordable, and acceptable methods of family planning of their choice, and and the right of access to appropriate health-care services, that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant

WHY ARE REPRODUCTIVE RIGHTS IMPORTANT?

Access to comprehensive sexual and reproductive health and rights is a basic human right. Women’s sexual and reproductive health is related to multiple human rights, including the right to life, the right to be free from torture, the right to health, the right to privacy, the right to education, and the prohibition of discrimination.

For women, the ability to control decisions pertaining to their reproductive health means that they control their own destiny. For this reason, reproductive rights are an essential component of an open society. Unfortunately, the global status of women’s and girls’ sexual and reproductive health and rights is disturbing: 214 million women worldwide want, but lack access to, contraception; more than 800 women die daily from preventable causes related to pregnancy and childbirth



Comprehensive definition of sexual and reproductive health and rights (WHO)

ICPD Program of Action, states that: “Everyone has the right to enjoyment of the highest attainable standard of physical and mental health. Appropriate measures should be taken to ensure, on a basis of equality of men and women, universal access to health-care services, including those related to reproductive health care, which includes family planning and sexual health. Reproductive health-care programs should provide the widest range of services without any form of coercion. All couples and individuals have the basic right to decide freely and responsibly the number of spacing of their children and to have the information, education, and means to do so.”

Around 25% of maternal deaths could be averted if all women wishing to avoid pregnancy could use modern methods of contraception. According to WHO "Reproductive and sexual ill-health accounts for 20% of the global burden of ill-health for women, and 14% for men”.

WHY RH MATTERS?

Women and girls around the world, especially those living in poverty, face restricted or no access to information and services about their reproductive health and rights. Some of the barriers to sexual and reproductive health and rights include discrimination, stigma, restrictive laws and policies, and entrenched traditions. Progress remains slow despite the evidence that these rights can have a transformative effect, not only on individual women, but on families, communities, and national economies. To drive equality, we all must commit—fully and actively—to the sexual and reproductive health and rights of all women, girls, and trans people.

SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS

The Committee on Economic, Social and Cultural Rights and the Committee on the Elimination of Discrimination against Women (CEDAW) have both clearly indicated that women’s right to health includes their sexual and reproductive health. This means that States have obligations to respect, protect and fulfill rights related to women’s sexual and reproductive health.

Despite these obligations, violations of women’s sexual and reproductive health rights are frequent. These take many forms including denial of access to services that only women require, or poor-quality services, subjecting women’s access to services to third party authorization, and performance of procedures related to women’s reproductive and sexual health without the woman’s consent, including forced sterilization, forced virginity examinations, and forced or unsafe abortion.

Women’s sexual and reproductive health rights are also at risk when they are subjected to early marriage. Violations of women’s sexual and reproductive health rights are often deeply engrained in societal values pertaining to women’s sexuality. Patriarchal concepts of women’s roles within the family mean that women are often valued based on their ability to reproduce.

Early marriage and pregnancy, or repeated pregnancies spaced too closely together, often as the result of efforts to produce male offspring because of the preference for sons, has a devastating impact on women’s health with sometimes fatal consequences. Women are also often blamed for infertility, suffering ostracism, and being subjected various human rights

violations as a result.

CEDAW (article 16) guarantees women equal rights in deciding "freely and responsibly on the number and spacing of their children and to have access to the information, education and means to enable them to exercise these rights." CEDAW (article 10) also specifies that women's right to education includes "access to specific educational information to help to ensure the health and well-being of families, including information and advice on family planning."

The Beijing Platform for Action states that "the human rights of women include their right to have control over and decide freely and responsibly on matters related to their sexuality, including sexual and reproductive health, free of coercion, discrimination and violence."

The CEDAW Committee's General Recommendation 24 recommends that States prioritize the "prevention of unwanted pregnancy through family planning and sex education." The CESCR General Comment 14 has explained that the provision of maternal health services is comparable to a core obligation which cannot be derogated from under any circumstances, and the States have to the immediate obligation to take deliberate, concrete, and targeted steps towards fulfilling the right to health in the context of pregnancy and childbirth.

Human rights standards in this area are summarized in the OHCHR information series on sexual and reproductive health and rights.

Reproductive Health eludes people because of factors as inadequate levels of knowledge about human sexuality and inappropriate or poor quality reproductive health information and services. The prevalence of high-risk sexual behavior, discriminatory social practices, negative attitudes towards women and girls and limited power many women and girls have over their sexual and reproductive lives is also included. Adolescents are particularly vulnerable because of their lack of information and access to relevant services. Older women and men have distinct reproductive and sexual health issues, which are often inadequately addressed. The current international understanding of reproductive and sexual rights includes the rights to:

- Reproductive and sexual health as a component of overall lifelong health.
- Reproductive decision-making, including choice in marriage, family formation, and determination of the number, timing, and spacing of one's children; and the right to the information and the means to exercise those choices.
- Equality and equity for women and men to enable individuals to make free and informed choices in all spheres of life, free from gender discrimination.
- Sexual and reproductive security, including freedom from sexual violence and coercion, and the right to privacy.

Components of Reproductive and Sexual Rights

These rights include:

- The right to survival / right to life: abrogated by maternal mortality.
- The right to liberty and security of the person: Abrogated by female genital mutilation,

compulsory sterilization, and the criminalization of contraception, among others.

- The right to the highest attainable standard of health.
- The right to marry and form a family.
- The right to a private and family life: Abrogated by state or community interference in the decision of whether or when to have children.
- The right to family planning.
- The right to the benefits of scientific progress including quality contraception
- The right of women to education.
- The right to non-discrimination based on sex.
- The right of non-discrimination based on age: abrogated when young people are denied information and confidentiality about reproductive health services.
- The right to receive and impart information and the right to freedom of thought.

5.2 REPRODUCTIVE HEALTH SERVICES PACKAGE

5.2 REPRODUCTIVE HEALTH SERVICES PACKAGE (RHSP)

Reproductive Health care is defined as the constellation of methods, techniques and services that contribute to reproductive health and well- being through preventing and solving reproductive problems. It also includes sexual health, the purpose of which is the enhancement of life and personal relations and not merely counselling and care related to reproduction and sexually transmitted diseases.

Reproductive Health Services Package (RHSP):

The Reproductive Health Package is a broad framework for the whole country. The rationale for putting this forward is to enable program managers to assess management implications for implementing various services at various facilities. It is recognized that due to diverse social, economic, and cultural settings of various regions of Pakistan, no single package could be suggested for nation- wide implementation.

Though existing health and family planning programs in Pakistan are providing a number of services through the current infrastructure that could be categorized as part of reproductive health services, availability of resources and capacity to deliver various services effectively would ascertain the constellation of services to be made available and level of technical competence required to deliver the same.

The National Reproductive Health Services Package (RHSP) for the service delivery outlets is based on the available information of levels of fertility and mortality, diseases burden, and the capacity of the health services infrastructure (of both Ministries of Health and Population Welfare and the public and private sectors).

Components of the Reproductive Health Services Package

- The package includes the following:
- Comprehensive family planning services for females and males.
- Maternal health care including safe motherhood, post-abortion care for complications

Infant Health Care

(newborn to children of age less than 1 year)

- Management of reproductive health related problems of adolescents
- Management of other reproductive health related problems of women
- Prevention and management of RTIs, STIs and HIV & AIDS
- Management of infertility
- Detection of breast and cervical cancers
- Management of reproductive health related issues of men.

Listed below are the important aspects to be covered by the package.

Family Planning:

The aim of Family Planning Program is to enable couples to decide freely about the number & spacing of their children and to have the information and means to do so. Informed individuals act responsibly in the light of their own needs and those of their families and communities. The principle of informed choice is essential for long term family planning. Any form of coercion has no part to play.

Dissemination of information and education about all the family planning methods and quality service provision at a widespread level is must for the acceptance of family planning and success of the program.

Comprehensive family planning services for females and males include:

- Information about availability, advantages, efficacy, side effects and contraindications of contraceptives, including natural methods.
- Availability and provision of different methods with safety and quality
- Appropriate screening of clients
- Supportive counselling
- Management of side effects
- Follow-up

Maternal Health Care:

Complications related to pregnancy and childbirth, are among the leading causes of mortality in women of reproductive age in our country. The age at which women begin or stop childbearing, the interval between each birth, the total number of lifetime pregnancies, the social, cultural and economic circumstances in which women live, all influence maternal morbidity and mortality.

Many abortions carried out are self- induced and unsafe leading to a large fraction of maternal deaths or to permanent injury. Maternal deaths have serious consequences within the family given the crucial role of the mother for her children's health and welfare.

The death of the mother decreases the rate of survival of her young children. Greater attention to the reproductive health needs of female adolescents and young women could prevent the major share of maternal morbidity and mortality through prevention of unwanted pregnancies and any subsequent poorly managed abortion. Safe motherhood has been accepted as a strategy to reduce maternal morbidity and mortality.

Maternal Health Care
(Safe Motherhood) includes the following services.

- Antenatal registration and care
- Treatment of existing conditions (e.g., anaemia, malaria)
- Advice regarding nutrition and diet

- Iron / folate supplementation
- Essential Obstetric Care (EOC)
- Clean and safe delivery
- Early detection and management of postpartum complications
- Prevention and management of urinary and rectal fistulae and prolapsed.
- Genetic counselling
- Tetanus toxoid immunization
- Blood test during pregnancy for RH incompatibility and screening for HIV &AIDS.

FWW at her level provides initial help /care for Obstetric emergencies and refers the patient to a proper facility without loss of valuable time.

Post Abortion Care:

add. However, several informal channels report that multiparious currently married women with high unmet need for contraception do seek abortion for unwanted pregnancies, mostly from untrained or not well-trained care providers in communities.

The reproductive health services will give attention to prevention of abortion by creating awareness about its hazards and related psychosomatic disorders. Abortion unfortunately is often used as a family planning method or replacement of using a reliable contraceptive. Therefore, women need to be encouraged to use effective contraceptives to avoid unwanted pregnancies rather than resorting to unsafe abortion. Staff, at appropriate facilities will be given training to be able to manage the referred cases of complications of abortions. Post-abortion counselling will be given to minimize the psychological trauma of abortion and to provide advice regarding family planning to avoid recurrence. Efforts will be made to strengthen provision of emergency care services in life- threatening circumstances at appropriate facilities.

- Create awareness about dangers of abortion
- Detection and early management of complications of abortion
- Counselling to post abortion cases including advice regarding family planning to avoid recurrence.

Infant Health Care (newborn to children of age less than 1 year):

Care of infants and children includes:

- Resuscitation of the newborn and prevention and management of hypothermia
- Early and exclusive breastfeeding and active discouragement of formula milk
- Management of infections, including ophthalmia neonatorum and cord infections.
- Detection of congenital abnormalities
- Management of low birthweight and malnutrition

- Introduction of timely and appropriate weaning
- Awareness among parents regarding safe and aseptic circumcision of male children and to engage a trained person for this purpose.
- Full immunization before age of 12 months.

Management of reproductive health
Related problems of adolescent girls and boys:

The reproductive health needs of adolescents have been largely ignored to date. Adolescents should be helped to attain a level of maturity required to make responsible decisions to understand their sexuality and protect them from unwanted pregnancies, STIs and subsequent risk of infertility. This should be combined with educating young men to respect women's self- determination, to share responsibility with women in matters of sexuality and reproduction.

Motherhood at a young age is responsible for high number of maternal deaths and children of young mothers have higher levels of morbidity and mortality.

Provision of services to adolescents includes:

- Education regarding physiological body changes at puberty
- Management of problems like dysmenorrhea, vaginal discharge, hirsutism, psychosomatic disorders, sexual abuse, substance abuse, abnormal sexual behaviour
- Information for personal hygiene and balanced nutrition
- Detection and management of developmental abnormalities like imperforate hymen, early and delayed menarche, abnormalities in secondary sex characters, undescended testes, and gynaecomastia

Management of other reproductive health related problems of women:

These include:

- Awareness, detection, and management of pre and menopausal syndrome
- Detection and management of menopause related deficiencies
- Management of female sexual dysfunction like loss of libido, dyspareunia
- Management of post-menopausal circulatory diseases

Prevention and management of RTIs, STIs, and HIV& AIDS:

The incidence of STIs is high and increasing, and the situation has aggravated with the emergence of HIV virus. The social and economic disadvantages that women face make them especially Vulnerable to sexually transmitted infections including HIV, due to the high-risk sexual behavior of their partners. In women, the symptoms of STIs are often hidden making them more difficult to diagnose than in men, and health consequences are often greater, including increased risk of infertility and ectopic pregnancy. The risk of transmission

from infected men to women is greater than from infected women to men, and many women are powerless to take steps to protect themselves. Efforts should be made to disseminate information and educate the public for services in this context which include:

- Information for prevention of RTIs, STIs and HIV & AIDS
- Screening and / or management of RTIs, STIs and HIV & AIDS

Management of Infertility:

Infertility management should form a part of family planning services as treatment of infertility is expensive and the facility is not available to all those who need it. Some causes of infertility are not preventable but infertility due to infection may be prevented by controlling STIs, providing adequate obstetric care and avoiding illegal / unsafe abortions.

Management includes:

- Prevention through information
- Management of allied problems
- Investigation and early treatment of infections causing infertility

Prevention & Detection of Cancers:

All sexually active women should have a regular yearly screening test for cancer cervix. They should check themselves at monthly intervals for any lump in breast. All this is simple and cost effective and saves the life of many individuals if the disease is diagnosed in time. The services include:

Breast Cancer

- Information and training for examination of breast
- Early detection and management
- Screening for breast lumps

Cervical cancer

This refers to the cancer of the mouth of the uterus or cervix. This is a great tragedy, as it is one of the unique cancers, which can be picked up during the precancerous phase and there is a vaccination for prevention. As the developing world witnesses a sharp reduction in the new cases of cervical cancer Pakistan witnesses a rising incidence. Also, unfortunately due to the absence of any National screening Program, most of the women present in stage 3 or 4, when immense pain and illness is inevitable, with almost no chances of cure.

Nutritional deficits

Women with closely spaced repeated pregnancies also experience nutritional depletion, which is compounded by physical, financial and emotional stresses. Even after the age of 35 years, women continue to become pregnant and face high risk of maternal mortality and later the problems of menopausal syndrome and deficiencies.

Management Of Reproductive Health Related Issues Of Men:

Men are important partners for reproductive health program as they also have reproductive health concerns of their own which are mostly not being addressed in the current health and population programs. These include family planning, prevention and management of sexually transmitted diseases, sexuality, and sexual dysfunction such as impotency, infertility, etc. Problems of RTIs and STIs among men have been a neglected area within the formal health sector. Lack of awareness and non-availability of services for men has encouraged traditional healers and hakims. Furthermore, the health status of men and their attitudes and behaviors towards family planning, sexuality, prevention of sexually transmitted diseases, etc., have significant effects on women's reproductive health and responsible parenthood. Hence, RHS Package will focus to encourage men's responsibility for sexual and reproductive behavior, increase male participation in family planning and promote their role in responsible parenthood.

Counselling Should Be Done On Following:

- Counselling and motivation for family planning, reproductive rights of women, and responsible parenthood
- Counselling on male sexual problems and management of male sexual dysfunction
- Counsellling for prevention of RTIs, STIs, HIV & AIDS and treatment of infertility among males
- Detection and management of reproductive tract cancer and related problems

The reproductive health package presented above is based on a life-cycle approach of women and men. Various aspects of the Package focus on matters related to reproduction and problems and risks associated with it. For effective implementation of all essential components of the RH Package considerable managerial, technical and financial inputs would be required. Regions which are underserved or have poor accessibility and weak infrastructure deserve special attention. It is not possible for most services to be made available at facilities, program managers will be able to design local programs that are feasible, economically viable, affordable and effective in their settings. Though the burden due to maternal mortality and morbidity is high, cost-effective programs will be evolved to fulfill the needs of the poor and disadvantaged segments of population.

5.3 LIFECYCLE APPROACH TO REPRODUCTIVE HEALTH

5.3 LIFE CYCLE APPROACH TO REPRODUCTIVE HEALTH

Reproductive health is not merely confined to the health of the individual during his or her reproductive years, it is a continuum of services, a person needs from birth to later age.**The routine care girls get as infants determines their whole future**, wellbeing, is a life-long concern.

The simple way to look at this is as follows,

The average adolescent girl gets good comprehensive sexuality education that enables her to make choices like when she wants to have a baby, know how she can have a good life after babies

The women should be aware of the need for checkup for cervical cancer and know when menopause starts.

For children, the approach includes good nutrition and exercise, vaccinations and good education on healthy behaviours. And by the time a woman gets pregnant, it means she should know that she needs to follow health workers' advice and eat foods rich in folic acid

and proteins.

Here are some quotes from the experts:

“If a pregnant woman receives no food or little food, if she gets malaria, her baby is likely to come small, and this has implications on the child’s own ‘reproductive health career’,”

“We [shouldn’t] talk to women in fragmented ways,”

“We need to think about a life-long process.” That means reaching girls well before they become pregnant. “That will help us address issues before girls conceive and give them skills so they can negotiate their sexuality.”

Children can grasp health messages from birth. “The newborn should be able to bond with both parents, hear the positive messages, and be in a good environment because everything will influence her future in their teens, then you are done for because this is the critical stage when they develop mentally and physically’’

“The teen years are when many things go wrong for girls, with unwanted pregnancies, abortions, and HIV and other sexually transmitted diseases.

Therefore, gender equality in access to education is crucial. A girl or woman should not wake up and find that she is pregnant and [only] then wonder what she should do next.’’

“That’s why people are afraid to even say, ‘I’m pregnant’ or ‘I’ve missed a period.’ Yet we know the first three months are vital … we need to check a woman for everything.”

That is particularly unfortunate since these visits are designed to give women education on what foods to eat during pregnancy, preparations for birth, advice on breastfeeding, HIV testing and prevention of mother-to-child transmission of HIV, and they get to go home with insecticide-treated bed nets to protect against malaria, which disproportionately strikes pregnant women.

The way a pregnant woman is treated will have a huge impact on what sexual and reproductive health of the nation will look like in the future.Women need to become enable to take care of younger nieces, daughters, nephews and sons.

The Life Cycle Approach Recognizes

That Each Stage Of Life From Infancy To Old Age Has Reproductive Needs:

- The health of the infant is largely dependent on the mother’s health status and access to health care during pregnancy, childbirth and immediate postpartum period.
- RH concerns increase during adolescence for both boys and girls
- Reproductive journey for the women during the reproductive years.
- Earlier reproductive events will have a bearing on the general health of an individual when one gets old.

Life Cycle Approach to Women's Health:

ICPD Plan of Action proposes to consider girls and women's health services as the life cycle approach as they are prone to several problems throughout their life (at every stage of their life cycle).

Girls often suffer from nutritional deficiencies in childhood and adolescence that could lead to serious problems like contracted pelvis, anaemia, iodine deficiency, etc. Obstructed labour due to contracted pelvis, iron deficiency anaemia and iodine deficiency often lead to the death of the mother and / or baby. Young girls are also at risk of teenage pregnancies due to early marriages, hence, at higher risk of maternal mortality.

Figure 2. Exemplary illustration of SRHR issues and the components of the essential package of SRHR interventions proposed by the Guttmacher-Lancet Commission for use during the life course

0–9

INFANCY AND CHILDHOOD

Antenatal, childbirth, and postnatal care, including emergency obstetric and newborn care

Prevention, detection, immediate services, and referrals for cases of sexual and gender-based violence

Prevention and treatment of HIV and other sexually transmitted infections

10–19

ADOLESCENCE

Comprehensive sexuality education (in and out of school)

Prevention, detection, and management of reproductive cancers, especially cervical cancer

Counselling and services for a range of modern contraceptives, with a defined minimum number and types of methods

Safe abortion services and treatment of complications of unsafe abortion

Prevention, detection, immediate services, and referrals for cases of sexual and gender-based violence

Information, counselling, and services for sexual health and wellbeing

Prevention and treatment of HIV and other sexually transmitted infections

50 and beyond

POST REPRODUCTIVE AGE

Prevention, detection, immediate services, and referrals for cases of sexual and gender-based violence

Information, counselling, and services for sexual health and wellbeing

Prevention and treatment of HIV and other sexually transmitted infections

Prevention, detection, and management of reproductive cancers, especially cervical cancer

Menopausal and post menopausal counseling and morbidities

15–49

REPRODUCTIVE AGE AND ADULTHOOD

Prevention, detection, and management of reproductive cancers, especially cervical cancer

Counselling and services for a range of modern contraceptives, with a defined minimum number and types of methods

Safe abortion services and treatment of complications of unsafe abortion

Information, counselling, and services for subfertility and infertility

Prevention, detection, immediate services, and referrals for cases of sexual and gender-based violence

Information, counselling, and services for sexual health and wellbeing

Prevention and treatment of HIV and other sexually transmitted infections

Comprehensive sexuality education

Antenatal, Childbirth, and postnatal care

Women with closely spaced repeated pregnancies also experience nutritional depletion, which is compounded by physical, financial and emotional stresses. Even after the age of 35 years, women continue to become pregnant and face high risk of maternal mortality and later the problems of menopausal syndrome and deficiencies.

For woman risks are added, among other things, by each pregnancy and process of childbirth, by taking more responsibility of fertility regulation especially using hormonal methods, by being more vulnerable to reproductive tract infections than men and by experiencing domestic violence /trauma and gender-based sexual abuse.

Men too, experience ill-health related to reproductive system but to a lesser degree than women. Men's role in reducing women's reproductive ill-health is fully recognized in this document to evolve strategies and activities highlighting their responsibilities.

REPRODUCTIVE HEALTH: LIFE CYCLE APPROACH

Stages in Life Cycle	Health Issues	RH Concerns	Promotion, Prevention Treatment, Rehabilitation
• Perinatal (28 weeks' Gestation -7 days after birth)	• Foetal death • Intra-uterine retardation Low birth weight and Prematurity • Immunizable diseases	Maternal Health	• Prenatal care • Nutrition • Immunization with Tetanus Toxoid

Stages in Life Cycle	Health Issues	RH Concerns	Promotion, Prevention Treatment, Rehabilitation
Infancy	Abnormal growth and development	Maternal and Child Health	Care of mother and newborn (Mother baby care package)
(Birth -1 year)	Malnutrition		Breast feeding
	Communicable disease		Immunization (EPI)
	Accidents		Growth monitoring (mile stones)
	Child abuse		Nutrition, Education and Counselling

			Oral Rehydration Therapy (ORT)
			Control of Diarrheal Diseases (CDD)
			Control of Upper Respiratory Tract infection
			Education and counselling on prevention against accidents and Substance / Sexual abuse.
Childhood	Infectious Diseases	Child Health and Nutrition	Immunization (EPI)
(1-10 years)	Malnutrition		Oral Rehydration Therapy (ORT)
	Accidents and injury		Control of Diarrheal Diseases (CDD)
	Child abuse		Acute Respiratory Infection (ARI) Control
			Growth monitoring
			Nutrition Supplementation
			Parent's counselling on normal growth and development of a child.
			Prevention against accidents and Substance/ Sexual abuse.
Adolescence	Unhealthy lifestyle	Adolescent Sexuality and Family Planning	Education on healthy lifestyle
(11 - 21)	Early marriage		Nutrition and Fertility awareness
	Unwanted pregnancy		FP information and service
	Complications of teen-age pregnancy		Counselling on sexuality
	Morbidity and		Treatment of RTIs and

	mortality due to early pregnancy		
	RTIs / STIs.		

Stages in Life Cycle	Health Issues	RH Concerns	Promotion, Prevention, Treatment, Rehabilitation
			referral
Adulthood / Reproductive Years	• Violence • Harmful traditional practices • RTI, STIs • , HIV & AIDS • Pelvic • Inflammatory Disease (PID) Maternal mortality and morbidity • Complications of abortions • Fertility regulation • Infertility • Sexual abuse/ harassment • Domestic	• Safe Motherhood Family Planning Reproductive Tract Infections (RTIs), AIDS • Counselling and education Detection and Prevention of Violence Against Women (VAW)	• Maternal care • Nutrition • FP information and service • Infertility diagnosis / referral • Counselling on human • Sexuality • Violence Against Women (VAW) and Violence Against Men (VAM) • RTIs, HIV & AIDS diagnosis and management / referral
Post Reproductive Years Female	• Sexual dysfunction • Menopausal problems • Osteoporosis • Cancers of reproductive tract • Depression	• Female Reproductive Health	• Counselling / assurance • Nutrition • Supportive Care • Early diagnosis and treatment • Psychological support

Male	• Male sexual dysfunction • Occupation related RH • Depression	• Male Reproductive Health	• Counselling / assurance • Nutrition • Supportive Care • Early diagnosis and treatment of cancers • Psychological support

THE GIRL CHILD

Discrimination against the Girl Child:

Very often the discrimination based on sex, starts even before the birth of a girl. This continues through the early stages of life. And then makes its way into affecting the studies and opportunities. It is vital to ensure equality for the girl child to ensure that women realize their full potential and become equal partners in development. The human rights of women and girls are an integral part of human rights.

The Girl Child:

In several countries, the practice of prenatal sex selection, higher rates of school enrollment for boys as compared with girls, suggest that “son preference” is curtailing the access of girl child to food, education, and health care. Son preference is reflected in discrimination against female children in household allocation of food and utilization of health services. It is the main explanation for excess female mortality in childhood.

- Your work should
- To increase public awareness of the value of the girl child, and concurrently to strengthen the girl child’s self- image, self- esteem, and status.
- To improve the welfare of the girl child, especially in regards to health, nutrition and education

Reasons given by families for preferring sons to daughters include:

- Girls are married outside the family; any investment in them is lost to the family
- Girls contribute little to household expenses
- Girls require large dowries and expensive weddings
- Girls provide no support to the family of origin after marriage.

For these reasons, women as primary caretakers of children preferred to have sons and to maintain them in good health since sons were essential for stable marriage and for their old age support. This resulted in gender inequality in general and health care of children in the household. The consequence is high female childhood mortality. Social pressures, especially

for low-income girls and young women influence early marriage and pregnancy, establishing at an early age a pattern of high fertility and poor sexual and reproductive health among low-income girls and young women. Investment made in girl child's health, nutrition and education, from infancy through adolescence, is critical.

Actions:

Overall, the value of girl children to bot their family and society must be expanded beyond their definition as potential child bearers and caretakers and reinforced through the adoption and implementation of education, on social policies that encourage their full participation in the development of the societies in which they live.

5.4 NUTRITION FOR ADOLESCNETS

NUTRITIONAL REQUIREMENT OF ADOLESCENCE (YOUTH)

Adolescence is a period in which the growth spurt is maximal, and males and females may grow at a rate of 10 and 8 cm per year respectively. Therefore, absolute demands for nutrition are great. Failure to consume an adequate diet at this time can disrupt normal growth and pubertal development.

Energy needs for individual adolescents vary according to sex, age, body size, pubertal development, and physical activity. An adequate caloric intake during adolescence results in healthy adults, reduction in stunting and abnormalities of pelvis; (these may be associated with problems in delivery and low birth weight).

Protein:

The dietary need for protein rises during adolescence but medium intakes of protein are well above the recommended values even for children from poor families. If energy is limited, however, dietary protein may be catabolized, and growth may be compromised even though the protein intake appears adequate.

Carbohydrates and Fats:

Several health organizations recommend that diet of adolescents should contain less than 30 percent of total calories from fat with less than 10 percent saturated fat and 300 mg cholesterol. Dietary guidelines also recommend that over 55 percent of calories should be from carbohydrates with emphasis on foods rich in complex carbohydrates and fiber, vitamins and minerals.

Vitamins and Minerals:

The need for vitamins and minerals also rises markedly during this period. Calcium is required for skeletal mass and iron for expansion of blood volume.

Daily Food Guide for adolescents:

- 5 roti made of whole-wheat flour, baked in a tandoor (oven)
- 3 fruits
- 125 gm vegetable
- 250 gm legumes
- 30 gm meat or egg
- 3 glasses of milk or yogurt
- 4 teaspoons oil or fat

NUTRITIONAL CONCERNS

Five common nutritional concerns have been identified among adolescents: low consumption of fruit and vegetables, whole grains, and calcium and low-fat dairy foods; high consumption of sweetened beverages; and frequent consumption of fast food.

POOR FRUIT AND VEGETABLE INTAKE:

A diet rich in fruits and vegetables during adolescence may help to prevent future cardiovascular disease, several forms of cancer, and type 2 diabetes. The substitution of fruits and vegetables for higher-energy foods in the diet also is effective in managing body weight.

Different types of fruits and vegetables provide different nutrients, making it important to consume a variety of choices from food subgroups (eg, citrus fruits, dark green and orange vegetables, tomato products, legumes). Whole fruits rather than fruit juice should provide most of the total daily fruit intake to help ensure adequate fiber in the diet

REFINED DIET:

Replacing most refined grains in the diet with whole-grain products also may help prevent cardiovascular disease, type 2 diabetes, and excess weight gain. most adolescents should eat three or more ounce-equivalent servings of whole grains every day. on average, young people consume one or fewer ounce-equivalent servings per day. Ready-to-eat cereals and yeast breads are the most common sources of whole grains among youth.

POOR INTAKE OF DAIRY PRODUCTS

Adolescents should consume at least three servings of fat-free or low-fat milk products (1 serving=1 cup of fluid milk, 1 cup of yogurt, or 1.5 oz of cheese) and 1,300 mg of calcium per day. To support bone health and prevent chronic disease, it also is recommended that adolescents consume at least 400 IU of vitamin D per day through vitamin D-fortified milk (100 IU per 8-oz serving) and vitamin D-rich foods (eg, fortified cereals, egg yolk) or a supplement. Only 25% of males and 11% of females achieve the recommendation for intake of dairy products.

TOO MUCH SUGAR AND POP DRINKS

High consumption of sugar-sweetened beverages is of concern because such drinks promote dental caries, are energy-dense, and generally are not significant sources of essential nutrients. Consuming sugar-sweetened beverages in place of water and nutritious beverages (eg, milk, 100% fruit juice) may lead to excess weight gain and obesity if youth do not compensate by adjusting their caloric intake from other sources.

When assessing the impact of sugar-sweetened beverage intake on diet quality, it is important to consider both the large variety of adolescent intakes of soda pop, sports drinks, energy drinks, punches, fruit drinks that are not 100% juice, and sweetened teas. Most adolescents' calories from sugar-sweetened beverages are consumed in the home

FREQUENT EATING OUT:

Frequent eating at fast-food restaurants has been related to less healthful dietary patterns and may promote excess weight gain. Youth who often eat at fast-food restaurants tend to have higher intakes of fat, sodium, and soft drinks and lower intakes of nutrient-dense foods such as fruit, vegetables, and milk.

To promote healthier choices, clinicians should help teens and their families learn how to locate and interpret the nutrient content information for fast-food menu selections. As an alternative to eating at fast food restaurants, families should be encouraged to share more meals at home. It may be beneficial to spend some time with families to develop a schedule for shared meals and to provide ideas for affordable healthy meals that can be quickly prepared together at home.

Healthy eating during adolescence

Healthy eating during adolescence is important as body changes during this time affect an individual's nutritional and dietary needs. Teens are becoming more independent and making many food decisions on their own. Many teens have a growth spurt and an increase in appetite and need healthy foods to meet their needs. Teens tend to eat more meals away from home than younger children. They are also heavily influenced by their peers. Meal convenience is important to many teens, and they may be eating too much of the wrong types of food, like soft drinks, fast-food, or processed foods.

Also, a common concern of many teens is dieting. Girls may feel pressure from peers to be thin and to limit what they eat. Both boys and girls may diet to "make weight" for a particular sporting or social event.

Counselling Adolescents Encourage Good Eating Practices:

It is essential that adolescents learn what differentiates 'good' from 'poor' eating habits and how to alter the latter. They must know what nutrient needs must be met, especially iron and calcium which often tends to be low in their diet. At the same time, dietary fat, saturated fat, cholesterol, sodium, and sugar should be identified as food to be eaten in moderation. Junk food, rich in fats and sodium are often eaten as snacks.

Dietary Sources

- Additional milk or milk product
- An additional serving of fruit or vegetables high in vitamin C
- Some iron-rich food
- When possible, addition of meat to provide haem (iron)

5.5 NUTRITIONAL REQUIRMENTS OF ELDERLY PERSONS

Requirements for energy and micronutrients change throughout the life cycle. Although inadequate intake of certain micronutrients is a concern, problems also come from the dietary excesses of energy, saturated fat, cholesterol and eating refined carbohydrates, all of which are contributing to obesity and chronic disease. While the quantity of food required by the person in the later years of life is less than earlier years, the qualitative needs are important. Diversity of proteins, a sufficiency of vitamins and adequate minerals should be included in daily life. Foods should be attractive. In the later years of life, the output of enzymes is reduced, and the rate of digestion is much slower. For this reason, many elderly people find that eating less at each meal and more frequent is a highly satisfactory practice. Older people,65 and up are more vulnerable to nutritional deficiencies and nutritional problems are more common among them.

The elderly need at least two and if possible, more meals each day as they may not eat much at each meal. They need fewer calories than younger people, but about the same amount of protein and other nutrients. Women who have stopped menstruating need less iron than childbearing women. Old people may need soft food.

Possible difficulties in getting adequate nutrition in old age

- Problems of procuring and preparing foods
- Home life, such as suddenly living alone or having trouble getting around
- General health, which can make it harder for you to cook or feed yourself
- Medicines, which can change how food tastes, make their mouth dry, or take away your appetite
- Income, which means that they may not have as much money for food
- Altered sense of smell and taste
- Problems chewing or swallowing food
- Psychosocial problems
- Digestion problems
- Nutrient absorption problems
- Renal changes
- Memory loss (senile dementia), which may include forgetting to eat
- Sensory changes
- Physical problems like weakness, gouty arthritis, and painful joints.

ADVISE TO THE ELDERLY PEOLPLE FOR HEALTHY NUTRITION:

- The diet for elderly should have foods from each of the five groups. It is also worthwhile to select during the day varied foods from each group. It is desirable that each meal contain food from at least three food groups.
- Give preference to foods that contain fibers, such as: whole grains, legumes, vegetables and fruits.

- Give preference to foods that contain less salt, for example less soup powders and prepared sauces, less salty cheeses, less ready-made food, less snacks and salty seeds.
- Reduce fat intake - choose instead lean milk and meat products and use less fat in preparing the food.
- Use sparingly foods rich in saturated fat and trans fat – cakes, cookies, snacks, frozen processed food (sauces.
- Avoid sugars added to foods – stay away from sweetened drinks.
- One should balance between calorie intake from the food source and calorie burning by means of physical activity, to maintain a healthy weight.'

Nutritional requirements during later years

Elderly people are especially vulnerable to nutritional problems due to age related changes in their body (impaired physiological and anatomical capacity). An elderly person requires less energy than a younger individual due to reductions in muscle mass and physical activity. Some daily requirements for elderly people differ from those of younger adults. For example, to reduce the risk for age related bone loss and fracture, the requirement for vitamin D is increased from 200 IU/day to 400 in individuals of 51–70 years of age and to 600 IU/day for those over 70 years of age. Suggested iron intakes reduce however from 18 mg per day in women aged 19–50 to 8 mg/day after age 50, due to better iron conservation and decreased losses in postmenopausal women compared with younger women.

Calcium and Vitamin D

Older adults need more calcium and vitamin D to help maintain bone health. To meet these needs, select calcium-rich foods and beverages and aim for three servings of low-fat or fat-free dairy products each day. Other sources of calcium include fortified cereals and fruit juices, dark green leafy vegetables, canned fish with soft bones, and fortified plant-based beverages. Good sources of vitamin D include fatty fish, such as salmon, eggs and fortified foods and beverages. If you take a calcium supplement or multivitamin, choose one that contains vitamin D.

Calcium

An amount of 1200 mg daily: the calcium supply to the body will be attained by a combination of calcium rich foods, like low fat milk products, sardines, morning cereals enriched with calcium as well as tahini; together with calcium supplements. Calcium supplements are needed because it is usually difficult to supply the body's recommended daily allowance of calcium through food alone.

Vitamin D

This is needed in an amount of 800-1000 international units daily: the natural sources of vitamin D are food products rich in vitamin D (mainly fatty fish and enriched milk products) and exposure to the sun's ultraviolet rays. However, among many of the elderly in Israel (though Israel is a sun-drenched country) low levels of vitamin D3 were detected. In view of

this, the required daily dosage of vitamin D is 800-1000 international units and is based mainly on taking vitamin D as a food supplement (1 microgram contains 40 international units.)

Vitamin B12

Some adults older than 50 may not be able to absorb enough vitamin B12. Fortified cereal, lean meat and some fish and seafood are sources of vitamin B12. An amount of 2.4 micrograms daily (for healthy adults and under normal absorption conditions). Vitamin B12 is found in food from animal sources (like meat, fish milk products, eggs), in enriched food (like certain morning cereals) or as a food supplement. However, vitamin B12 deficiency is a common phenomenon among the elderly (up to 20%); ***therefore,*** it is recommended to take a daily food supplement of 2.4 micrograms. In cases of vitamin B12 deficiency due to absorption difficulty, it is necessary to "bypass" the digestive system and to administer vitamin B12 via a 1000 microgram sublingual supplement or by intramuscular injections.

Dietary Fiber

Eat fiber-rich foods to stay regular. Dietary fiber also may help lower the risk for heart disease and reduce your risk for Type 2 diabetes. Eating whole-grain breads and cereals, and more beans and peas, along with fruits and vegetables which also provide dietary fiber. The recommended amount through fiber rich food, e.g., vegetables and fruits (unpeeled), whole grains (whole wheat bread, oatmeal) and legumes.

Potassium

Consuming adequate potassium, along with limiting sodium (salt) intake, may lower the risk of high blood pressure. Fruits, vegetables, beans and low-fat or fat-free dairy products are good sources of potassium. Advise them to select and prepare foods with little or no added salt. Add flavour to food with herbs and spices.

Important facts about fats

Most of the fats should be polyunsaturated and monounsaturated fats, which are primarily found in nuts, seeds, avocados, vegetable oils and fish. Choose foods that are low in saturated fat and trans fat to help reduce your risk of heart disease.

Drinking liquids

It is important to drink plenty of liquids, preferably water, and to minimize drinking sweetened, carbonated drinks and/or drinks containing caffeine. The desirable amount of liquids is about 8 cups per day throughout the day (when part of the liquids can be consumed as food, like in soup) and a larger amount during hot weather or during strenuous efforts.

For caregivers for the elderly:

It is imperative to emphasize to the elderly the importance of drinking liquids, since they tend to drink very little for various reasons, such as a decline in the sense of thirst, impact of medications, difficulty in accessing drinks or in getting to the bathroom and more. Insufficient drinking may cause, low blood pressure (and increase the risk of falling), constipation, impair the kidneys' efficient functioning, impair the body's temperature regulation (the efficacy of

which declines at these ages) and increase the risk of dehydration. This risk is further augmented in times of acute illness, including fever disease, or when there is a “Heat wave” (at least 3 days of continuous high fever) or in case of diarrheas.

5.6 NUTRITIONAL REQUIREMENTS IN INFNACY AND CHILDHOOD

5.6 NUTRITIONAL REQUIREMENTS IN INFNACY AND CHILDHOOD

The common feature of infancy, childhood and adolescence is that all these age groups are undergoing rapid growth and development. This in turn poses a heavy demand on their nutritional requirements. Small children and infants do not have a well-developed body nutrient store, and therefore are more vulnerable to infection. In addition, they have a larger surface area compared to their body size. All these factors increase their basal metabolic rate (BMR), resulting in an increased requirement for nutrients. As FWW, you can assist families in choosing foods that keeps energy intake within reasonable bounds, while maximizing intake of nutrient-rich foods, particularly vegetables, fruits, legumes and whole grains.

INCREASED NEED FOR NUTRIENTS

Energy

While most adults require 25–30 calories per kg, a 4 kg infant requires more than 100 kilocalories per kg (430 calories/day). Infants of four to six months who weigh 6 kg require roughly 82 kilocalories per kg (490 calories/day). Energy needs remain high through the early formative years. Likewise, the requirement of proteins, vitamins, minerals and water are greater in infancy proportionate to the body size. The infant diet is composed of milk largely and may be deficient in ascorbic acid, A and D vitamins. It is important, therefore, to supplement these essential nutrients. Children of one to three years require approximately 83 kilocalories per kg (990 calories/day). Energy requirements decline thereafter and are based on weight, height, and physical activity

As an energy source, breastmilk offers significant advantages over manufactured formula milk. Breastfeeding is associated with reduced risk for obesity, a wide range of allergies, hypertension, and type 1 diabetes. It is also linked with improved cognitive development, and with decreased incidence and severity of infections. It is also less costly than formula feeding. The list below outlines the nutrients and other constituents of breastmilk:

- Water = 87–89%
- Vitamins (particularly vitamin A)
- Fat = 3–5%
- Energy = 60–70 kcal/100 ml
- Carbohydrate (lactose) = 6.9–7.2%
- Mineral = 0.2%
- Protein = 0.8–0.9%

Requirements for macronutrients (proteins, carbohydrates and fats) and micronutrients are higher on a per kilogram basis during infancy and childhood than at any other developmental stage. These needs are influenced by the rapid cell division occurring during growth, which requires protein, energy and fat. Increased needs for these nutrients are reflected in daily requirements for these age groups, some of which are briefly discussed below.

Water

Infants and children need plenty of water to drink, particularly when ill, or exposed to extreme temperatures. Total water requirements (from beverages and foods) are also higher in infants and children than for adults. Children have a larger body surface area per unit of body weight and a reduced capacity for sweating when compared with adults, and therefore are at greater risk of morbidity and mortality from dehydration. Parents may underestimate these fluid needs, especially if infants and children are experiencing fever, diarrhea or exposure to very cold or very hot temperatures.

Essential fatty acids

Requirements for fatty acids or fats on a per kilogram basis are higher in infants than adults. Some fatty acids play a key role in the central nervous system. However, infants and children should not ingest large amounts of foods that contain predominantly fats, so it is important to get the balance diet Nutritional requirements of all above age groups are dealt in detail, one by one below.

5.7 NUTRITIONAL REQUIREMENT OF INFANCY, WHO RECOMMENDATIONS

5.7 NUTRITIONAL REQUIREMENT OF INFANCY, WHO RECOMMENDATIONS

For infants and young children

In the first 2 years of a child's life, optimal nutrition fosters healthy growth and improves cognitive development. It also reduces the risk of becoming overweight or obese and developing NCDs later in life.

Advice on a healthy diet for infants and children is like that for adults, but the following elements are also important:

- Infants should be breastfed exclusively during the first 6 months of life.
- Infants should be breastfed continuously until 2 years of age and beyond.
- From 6 months of age, breast milk should be complemented with a variety of adequate, safe and nutrient-dense foods. Salt and sugars should not be added to complementary foods.
- Promoting appropriate infant and young child feeding practices

BREAST MILK

Breast milk is the best milk for the newborn and keeps babies healthy and helps them to grow well. Health professionals play a vital role in encouraging and counselling women how to breast feed. Counselling must begin in the prenatal period, when women have time to prepare mentally and physically and when the benefits and reduction in health risks for mother and baby can be stressed and absorbed.

These messages need to be transmitted to woman at every prenatal encounter and reinforced and supported in the immediate postpartum period. Good care of the breasts is important for the health of both the mother and her baby. Breast feeding should be started on the day of birth. At first the baby may not suck much but this lets the mother and baby get used to his sucking and prevents sore nipples.

The very first milk the breast makes is called colostrum. Although it looks watery it is very good for the baby and helps to protect him against infection and contains protein.

- Breast feeding should be started for the newborn as early as possible.
- Breast feeding immediately after delivery helps the uterus to contract and prevents heavy blood loss.
- Ideally breast feeding is started about half an hour after the delivery when the mother has had a little rest and is in a comfortable position.
- Colostrum (the milk during the initial three days after delivery) must be given because it contains life-saving antibodies and nutrients.
- Exclusive breast feeding i.e., giving only and only breast milk throughout the day and

night on demand of the baby is essential for 6 months. Even water is not given to the newborn.

- Frequent suckling to establish maximum milk production.
- Continue feeding the baby frequently until breast milk secretion begins after 2-3 days.
- Breast-feed frequently night and day from both breasts until they are emptied.
- Breast-feed exclusively till six months. Do not give water or other supplemental liquids such as ghutti, honey water, aniseed water, etc.
- Lactating mother should drink at least 8 glasses or more of fluids each day.

Composition of Human Milk and different Animal Milks:

Human milk has a larger content of water and sugar, and a lesser content of fat, salts and proteins. The protein of human milk is also chemically different from that of animal milks and is easily digested by the baby and has more nutritional value. The compositions are expressed in percentage below.

Constituents	Human	Buffalo	Cow	Goat
Water	87.89	81	87.27	86.8
Sugar	5.55	5.16	4.75	4.6
Fats	3.8	8.8	3.76	4.5
Proteins	2.53	4.32	3.5	3.3
Salts	0.23	0.72	0.72	0.8

ADVANTAGES OF HUMAN MILK:

Milk is a perfect food for the suckling of the same species; thus, the human baby thrives better on human milk. Two-thirds of the protein in human milk is lactalbumin, and 1/3 caseinogen, whilst in cow's milk 1/10th is lactalbumin and the remainder caseinogen. The mineral salts are higher, but milk sugar is much less in cow's milk. Because of the large amount of caseinogen, the curds formed in the child's stomach with cow's milk are coarse and large, whereas with human milk only loose flocculent mass is the result. Cow's milk will, therefore, disagree with infants and give rise to flatulence and diarrhea unless it is modified to resemble human milk in composition. Even then mother's milk contains specific antibodies, vitamins and other unknown qualities, which have remote effects on the nutrition of the body. Infants should always be brought up on human milk, for cow's milk, though humanized, can never be just as good.

WEANING/COMPLEMENTARY FEEDING

Weaning is misinterpreted by a large majority of women as "stoppage of mother's milk", but it actually means "inducing to feed otherwise than from the breast". It is the period during which the infant is gradually introduced to liquid/semi-solid foods by 6 months of age as recommended by WHO. This is the age when the mother's milk is not sufficient to meet the

increased nutritional needs of infant in terms of calories, proteins, minerals and vitamins specially the iron, vitamins A and C. introducing the child to new flavours helps him to accept the family food.

Before Advising About The Weaning Foods

Due Consideration Should Be Given To:

- The economic status of the family
- Level of hygiene at home
- Cultural pattern and capacity of mother to learn and follow advice
- Food habits and foods available to the family.

Most Pakistani families can afford rice, sooji, dal, egg, wheat/oats, banana, papaya, green leafy vegetables etc. These foods should be introduced in a well-cooked liquid/semi solid and easily digestible form, and then gradually and cautiously increased in quantity and thickened, with constant observation of the baby's stool to check "weaning diarrhea". In child feedings, SAFETY comes first. A border line diet is more valuable than a contaminated high value diet which could lead to death in an unhygienic surrounding.

Introducing a new food to the baby

- ¼ to ½ a teaspoon of the prepared food is given before breast feeding
- It is given at least once daily for a few days
- The quantity is slowly increased till they become accustomed to the flavour and consistency
- One food is introduced at a time for a few days before a change. This is done to check for development of food allergy
- If the child likes the food, it is given frequently so that the liking of the food is not lost.

Problems faced by Mothers in Weaning

- The baby may spit out the new food
- Some babies are slow in accepting innovations
- The baby may not take the full amount offered
- Forcing the child to eat may cause rejection of the food altogether
- The baby should be encouraged to take more interest in his food by letting him see and feel the food and the feeding bowl
- The early messy efforts to feed himself, by the eighth month, are not discouraged and a spoon is given as well to handle and eat with
- When more solid foods are introduced, the child is allowed to pick the food like a dry piece of bread to chew.

SELECTION AND COMPOSITION OF COMPLEMENTARY FOODS:

Since ancient time, communities have been using a combination of foods. The best way of planning nutritious weaning foods is to ensure that the food is a mixture of:

Protective foods:

Some green leafy vegetables like spinach, pepper, sweet potato, watermelon, beans etc.

Growth/Body building foods:

Meat, milk, lassi, fish, eggs, meat substitutes like moong dal, chana, chickpeas etc.

Energy Foods:

Staple foods like rice, wheat, bread etc.

Standardized /Complementary Weaning Foods Formulae for Infants

Five Months and Older

Khitchri

Rice	2tsp (teaspoon)
Dal	1 tsp
Oil	1 tsp
Salt	to taste

- Clean and wash rice and dal.
- Add rice and dal to salted water and cook.
- Add oil when khitchri is being boiled.
- Serve warm.

Kitchri with Vegetable

Rice	125gms/2 Tsp (Tablespoon)
Dal	125gms/2 Tsp
Oil	1 tsp
Salt	to taste

- Clean and wash rice and dal.
- Wash and cut carrot into small pieces.
- Add rice and dal and carrot to salted water and cook.
- Add oil when khitchri is being boiled, cook until tender.
- Serve warm.

Rice Kheer

Rice	1 tsp
Milk	1 cup
Sugar	2 tsp

- Clean and wash the rice.
- Add just enough water to boil rice and cook.
- Mash boiled rice.
- Mix sugar with milk and add to mashed rice, mix well to make it creamy in consistency.
- Serve warm.

Ferni

Rice flour	1 tsp
Milk	1 cup
Sugar	1 tsp
Water	2 oz

- Add water and sugar to milk and mix well.
- Add this mixture to rice flour and cook for 5 minutes.
- Serve warm.

Dalia

Dalia	1 tsp
Milk	1 cup
Sugar	2 tsp
Oil	1tsp
Water	1-1 1/2 cups

- Roast dalia in oil till it turns brown.
- Boil water, add dalia and cook it for 15 to 20 minutes.
- Remove from heat, add milk and sugar.
- Serve warm.

Vegetable Soup

Potato, carrot	1 piece of each seasonal vegetable
Onion	1 piece
Green vegetable	few leaves Tomato 1 piece

- Wash the vegetables and cut into small pieces.
- Take two glasses of water add vegetables and cook till vegetables are tender.
- Mash the vegetables and serve warm.

For Infants Six Months and Older

Potato with Milk

Potato	1
Milk	1 cup
Sugar	1 tsp

- Boil potato in excess water until tender.
- Remove skin and mash well.
- Add sugar and milk to mashed potato; mix well.
- Serve warm.

Banana Pudding

Bananas	2
Milk	1 cup
Sugar	1 tsp

- Peel and mash the banana.
- Add boiled milk and sugar to mashed banana.
- Mix well to a creamy consistency
- Serve warm.

Yogurt and Potato

Yogurt	1 Tsp
Potato	1
Sugar	1 tsp

- Wash and remove the skin of the potato. Cut into small pieces.
- Add just enough water to boil potato. Cook until tender.
- Beat yogurt and add sugar gradually to make it creamy in consistency.
- Mash boiled potato and add into the yogurt.

Sooji Kheer

Sooji	1 Tsp
Milk	1 cup
Sugar	to taste

- roast sooji in a pan till it turns brown.
- Add milk and sugar, mix well and let it boil. Serve warm.
- Boiled Egg
- Put 1 egg in excess water in a pan.
- Take out the egg after 1 minute of boiling.
- Peel off the shell.
- Mash the egg.
- Serve warm.

FOR INFANTS SEVEN MONTHS AND OLDER

- Channa Halwa or Moong Halwa

Chana/Moong	¼ oz
Suji	¼ oz
Milk	4 oz
Sugar	1 tsp
Oil	¼ oz

- Clean and wash channa (or Moong) and boil in water for 15 minutes and mash to creamy consistency.
- Brown suji in oil add to above mixture, then add milk & sugar and heat for 10 minutes.
- Serve warm.

Qeema / Chicken Khitchri

Rice	250 gm/4 Tsp
Qeema	125 gm/2 Tsp
Green vegetable few leaves	
Oil	1 Tsp

- Clean, wash and soak rice in water for half an hour.
- Boil keema in water with salt.
- Add oil to qeema till tender.
- Add rice to qeema, cook and serve warm.

5.8 ROLE OF FWW, TEACHING AND CONVINCING MOTHERS ABOUT CORRECT FEEDING

5.8 ROLE OF FWW, TEACHING AND CONVINCING MOTHERS ABOUT CORRECT FEEDING:

To be an effective counsellor the FWW should be a good role model in all respects. She should preach what she practices. A friendly relationship with people is important in teaching about feeding. Some mothers may feel insulted or threatened if another person starts teaching them about feeding their children. Show a loving concern for mothers and their families in other ways also. The best way to learn is from a friend. So, it is a good strategy for FWW to make friend circle among mothers before teaching them.

Once some women have learnt about feeding and start to feed their children in the way taught to them, others will learn from seeing their children grow up healthy. The messages about successful feeding can thus spread within a community. Some mothers are good teachers.

Counselling Mothers on Weaning:

It is not enough for the FWW to understand the meaning of weaning, when to start weaning and what foods to give but it is essential that she can communicate with the mother and educate her on how to wean her baby and to guide her to solve problems that she may encounter during weaning. Relevant information should be provided to women.

Therefore, counselling on weaning and diet during pregnancy and lactation will be dealt in this chapter and the FWW will refer back to this when studying “Pregnancy” and “Delivery and Newborn”.

Rules of Food Hygiene to be observed during weaning

- General cleanliness and hygiene are of prime importance.
- Protect food and utensils from flies.
- Always give cooked foods or freshly peeled fruit like banana to babies.
- Left-over foods MUST NOT be given to babies however nutritious and expensive they may be.

Preparing and mixing local foods for children:

Before preparing food, before eating it, and before feeding children, the hands should be washed with soap and water. Very small germs from dirty hands can be passed on the food. These germs are not visible, but they will be eaten with the food and may cause diarrhea and other illnesses. Cooking kills most germs. After cooking, handle food as little as possible and keep it in a covered container.

5.9 NUTRITION DURING PREGNANCY AND LACTATION

5.9 NUTRITION DURING PREGNANCY AND LACTATION

An unborn child needs a healthy and well-nourished mother to grow properly. Therefore, a mother needs to gain weight during pregnancy to help nourish her growing baby. Women who do not gain enough weight often have babies that weigh too little (low birth weight). A baby weighing less than 2.5 kg has an increased chance of both physical and mental health problems. It may also suffer more from infection and malnutrition compared with babies of normal weight.

Increased nutrients required during pregnancy

Energy, protein, essential fatty acids, vitamin A, vitamin C, B vitamins (B1, B2, B3, B5, B6, B12, folate), calcium, phosphorus, iron, zinc, copper and iodine.

Women should gain at least 11 kg during pregnancy. If the mother gains less than this, the baby's chances of survival and health declines. If a mother is overweight, she still needs to gain for her baby's health. She should not try to lose weight while she is pregnant.

Weight gain in pregnancy

A pregnant mother should gain weight smoothly and steadily. If weight gain occurs suddenly, she should see a health professional.

During the first three months, she should expect to gain a total of 1–2 kg.

During the last six months, she needs to gain about 0.5 kg each week.

If she has already gained 11 kg after six–seven months, she should continue to gain moderately until delivery.

The baby puts most of its weight during the last few months.

Eating during pregnancy

Women's nutrition during pregnancy and lactation should focus on the three micronutrients (vitamin A, iron and iodine) and extra energy intake/reduction of energy expenditure. Caloric intake should increase by approximately 300 kcal/day during pregnancy. This value is derived from an estimate of 80,000 kcal needed to support a full-term pregnancy and accounts not only for increased maternal and foetal metabolism but for foetal and placental growth.

Dividing the gross energy cost by the mean pregnancy duration (250 days after the first month) yields the 300 kcal/day estimate for the entire pregnancy. However, energy requirements are generally the same as non-pregnant women in the first trimester and then increase in the second trimester, estimated at 340 kcal and 452 kcal per day in the second and third trimesters, respectively. Furthermore, energy requirements vary significantly depending on a woman's age, BMI, and activity level. Therefore, the following are essential nutrition actions related to maternal nutrition:

- A pregnant or breastfeeding woman needs extra foods, especially those that are good sources of iron.

- Pregnant women need at least one additional meal (200 Kcal) per day during the pregnancy.
- A pregnant woman needs to cut down her energy expenditure. She should reduce her involvement in strenuous household tasks that lead to higher energy expenditure.
- Pregnant women should eat iodised salt in their diet.
- Pregnant women should take vitamin A rich foods (such as papaya, mango, tomato, carrot, and green leafy vegetable) and animal foods (such as fish and liver).
- In the malarious areas, pregnant women should sleep under an insecticide-treated bed net.
- Pregnant women during the third trimester of pregnancy should be de-wormed using mebendazole or albendazole (you will learn about the doses for this in Study Session 7 of this Module).
- Pregnant women need a well-balanced diet containing mixture of foods. This should include as far as possible food from the different food groups (animal products, fruits, vegetables, cereals and legumes).

Remember, there is no need for high-priced foods! A pregnant or lactating woman can get extra foods by eating a little more of ordinary meals. She should increase the amount of nourishment at one or two meals, not every meal.

Preventing anaemia in pregnancy

total red blood cell mass and plasma volume increase, but plasma volume increases to a greater extent resulting in hemodilution and anemia during pregnancy. Consequently, a hemoglobin <10.5 g/dl or a hematocrit <32% is considered anemic during the second trimester. Serum total protein and albumin also decrease by approximately 30% compared to non-pregnant values. Additionally, because estrogen increases the hepatic production of certain proteins, there is greater protein binding of corticosteroids, sex steroids, thyroid hormones, and vitamin D during pregnancy, resulting in lower free levels.

Some women feel weak and tired when pregnant. They may be anaemic, which in turn means that they may have difficulty in pregnancy and childbirth. Common problems linked to the mother's anaemia include:

- Babies will be born without three to six months iron supply
- Breastmilk may have insufficient iron.

Table 1

Trimester	Haemoglobin (g/dl)	Haematocrit (%)
First	<11.0	<33
Second	<10.5	<32

Third	<11.0	<33
Normal values for non-pregnant women	12.1 to 15.1	37-48%

Definitions of anaemia during pregnancy

A pregnant or breastfeeding mother should have enough iron to keep herself and her baby healthy. She should eat plenty of iron-rich foods every day such as dried beans, legumes, dark green leafy vegetables, liver, kidney and heart.

A pregnant mother should go for her first antenatal care visit at the latest by the fourth month of her pregnancy. At the clinic, check her urine for excess sugar and proteins, and her blood for malaria (if she is showing signs of infection). You may diagnose anaemia in the following way:

Examine the lower eyelids, the inside of the lips and the palms which should be bright pink; if there is anaemia, all of these will be pale whitish.

Appearance of a pregnant woman can suggest whether she is malnourished. Observe if she is generally thin or wasted. See if there are loose folds of skin over her upper arms, chest, or abdomen, or if her arms and legs are very thin. These signs will tell you whether she has stores of fat under her skin. If a woman shows these signs she is probably malnourished. All mothers suspected of being malnourished need extra help. They should be visited often. They should be encouraged to eat as much foods as they can afford.

- Give the mother iron tablets or tablets with iron and folate to build strong blood
- Remind the mother to take the tablets after a main meal. She should not take iron tablets with tea, coffee or milk
- If the iron tablets upset the mother or cause side effects, she should not stop taking iron, but eat more leafy vegetables.
- Recommended daily dietary allowances for pregnant and lactating women

Nutrient	Non-Pregnant	Pregnant*	Lactation*
Vitamin A (µg/d)	700	770	1300
Vitamin D (µg/d)	5	15	15
Vitamin E (mg/d)	15	15	19
Vitamin K (µg/d)	90	90	90

Folate (µg/d)	400	600	500
Niacin (mg/d)	14	18	17
Riboflavin (mg/d)	1.1	1.4	1.6
Thiamin (mg/d)	1.1	1.4	1.4
Vitamin B_6 (mg/d)	1.3	1.9	2
Vitamin B_{12} (µg/d)	2.4	2.6	2.8
Vitamin C (mg/d)	75	85	120
Calcium (mg/d)	1,000	1,000	1,000
Iron (mg/d)	18	27	9
Phosphorus (mg/d)	700	700	700
Selenium (µg/d)	55	60	70
Zinc (mg/d)	8	11	12

- *Applies to women >18 years old
- Data from Otten JJ, Pitzi Hellwig J, Meyers LD, Editors. Dietary reference intakes. The essential guide to nutrient requirements. Washington, DC: National Academies Press; 2006.

COUNSELLING PREGNANT WOMEN:

There are many beliefs and practices about pregnancy in different cultures. Some of these concerns the relationship between what the mother eats and how the child will develop. Certain foods are believed to produce a child of different characteristics: brave or coward, beautiful or ugly, generous or selfish, etc. There is no scientific evidence for these beliefs. However, in order to be able to advise mothers on the diet in pregnancy, it is important to understand the beliefs of mothers about various foods.

In many instances' mothers believe that if they eat too much the baby will grow too big. They think that the big baby will cause a long, painful and difficult delivery. This is not true, and it is a harmful belief. Even if mothers eat a lot, the baby will not grow larger than a certain size. The size of the baby is limited by the size of womb. If a mother eats well, both she and her baby will be strong and healthy at the time of delivery.

In some areas, pregnant women are given some special foods. These foods will often be nutritious. These are good practices, and we should encourage them. The husband may show special consideration for his pregnant wife and his help may be useful. There are also special beliefs and practices about diet and breast milk in different cultures. If a mother eats certain foods, it is believed that her milk may be spoilt or unsuitable for her child. Other foods are believed to increase the flow of milk.

The family welfare worker needs to know about all the beliefs and practices concerning food. Enquiries should be made from grandmothers and older women in the community. Customs which favour better nutrition should be encouraged and promoted when teaching about appropriate diets. Customs which are bad must be tactfully discouraged. FWW can motivate to improve health and nutrition of pregnant women by providing information, education and encouragement for taking a high nutritious and balanced diet.

Malnutrition in Pregnant Women:

There is no precise way of detecting which mothers are under-nourished during pregnancy. There are some women, however, among whom malnutrition in pregnancy can be suspected. They include those who are:

- At high risk according to a variety of factors
- Malnourished in appearance
- Have given birth to small and malnourished babies previously.

Pregnant women with special needs

Some pregnant women in your community will be particularly vulnerable. As FWW it is important that you identify the women who may need extra help and support. The box below gives examples of women who may need special help from you and outlines the kinds of service you can provide for them.

Identifying and helping pregnant women who need special help.

Pregnant women who might need special help include:

- Women from poor families, or who are unemployed
- Women who are widows/separated, and have no support
- Mothers who have given birth to many babies over a short time
- Women who are ill from diseases like Tuberculosis (TB)
- Women who look thin and depressed
- Mothers whose previous babies were small and malnourished
- Teenagers
- Women with a history of their baby or babies dying in their first year of life
- Mothers overburdened with work
- Mothers who are very worried, particularly first-time pregnancies.

The FWWs' role:

- Visit the pregnant women often
- Encourage them to eat as good mixture of foods as they can afford (fruits, vegetables, animal source foods)
- Let them be the first ones to receive iron or food supplements, when available
- Help them to get proper healthcare
- Encourage other members of the household to do some of the work and lessen the work burden on the woman.

Practical Diet for a Pregnant Woman

- Extra chapattis / rice than normal during each meal
- Meat, milk or eggs: one serving per day if possible
  - Meat helping daily, if it is not possible, mixed pulses can be taken to provide almost all the essential amino acids which are contained in meat
  - Milk daily, otherwise lassi / whey, yogurt (homemade)
  - An egg daily, if found expensive, hens may be kept for laying eggs. Hens are fed on kitchen garbage
- Fruits andvegetables: two or more servings
  - Fruit trees / plants can be grown at home
  - Growing / utilizing vegetables from the kitchen garden, which is very easy to maintain especially in village
  - Beans, peas, legumes should be taken more frequently
  - Mixed vegetables to be taken for better nourishment
  - Pulses can be taken with rice

Practical Diet for a Nursing Mother:

A breast-feeding mother has greater nutritional requirements than a pregnant woman to fulfill the requirement of the fast-growing baby according to quality nutritional standards. She should consume larger quantity of above-mentioned foods throughout the lactational period. She needs more of growth foods, energy foods, protective foods along with plenty of fluids, which will not only enhance milk production of breasts but will also supply the required nutrients for the baby's growth. Large quantity of

Recommended Dietary Allowances during Pregnancy and Lactation

	Nutrients	Normal Needs	Pregnancy	Lactation	Requirements
1	Calories	2100	2500	3100	6 chapattis/day during pregnancy and 7 chapattis/day, during lactation to meet the energy requirements of the developing foetus and milk production.
2	Proteins (gm)	62	70	82	For growth of the foetus and milk production.
3	Calcium (mg)	500	1150	1150	Formation of healthy bones and teeth and prevention of tetany.
4	Iron (mg)	14	18	18	Healthy development of the foetus and production of milk.
5	Retinol(µg) Vitamin A	750	750	1200	For development of healthy vision; milk is a good source of Vitamin A.
6	Thiamine (mg)	0.86	1.02	4.86	For the healthy development of foetus
7	Riboflavin (mg)	1.18	1.40	1.78	Meet the needs of the baby through mother's milk.
8	Niacin (mg)	14.0	16.24	20.60	Meet the needs of the baby through mother's milk.
9	Vitamin C (mg)	24.0	44.00	44.00	For the health of the mother and the foetus.
10	Vitamin D (µg)	-	10.00	10.00	Healthy formation of bones and prevention of rickets.

Nutrition during lactation (breastfeeding)

If all babies are to be healthy and grow well, they must be fed breastmilk. When a baby sucks at the nipple, this causes the milk to come into the breast and continue to flow. Breastmilk is food produced by the mother's body especially for the baby, and it contains all the nutrients (nourishment) a healthy baby needs.

A lactating woman needs at least two extra meals (550 Kcal) of whatever is available at home. In addition, a dose of vitamin A (200,000IU) should be given once between delivery and six weeks after delivery. This will enable the baby to get an adequate supply of vitamin A for the first six months. During the first six months the best way of feeding the baby is for the mother to breastfeed exclusively. The box below shows the nutrients required during lactation.

Increased nutrients required during lactation

Increased requirements: vitamins A, C, E, all B vitamins, and sodium (applies only to individuals under age 18).

In addition to extra meals and one high dose of vitamin A, a breastfeeding woman also needs:

- Iodised salt in her diet
- At least one litre of water per day
- Vitamin A rich foods (such as papaya, mango, tomato, carrot, and green leafy vegetables) and animal foods (such as fish and liver).

Food Fads, Taboos and Social Customs

- Belief in certain foods being “hot” or “cold”. This belief prevents the ingestion of certain highly nutritious foods especially during pregnancy and lactation. There is no known scientific basis for this belief. Any food eaten in very large amount can have unfavourable effects and should be taken in moderate amount with other foods to provide a balanced diet. Usually spicy foods, fried foods and high protein foods are considered as “Hot” as these foods induce a sensation of thirst due to the long time taken for digestion and absorption; and, in the olden days the source of drinking water was a well, which may have contained a high count of pathogenic bacteria. When such water was consumed in large quantities, it resulted in a large intake of harmful bacteria, which, in turn, may have caused diarrhea. That is why certain foods were considered “hot”.
- There are certain foods that are considered as “cold” e.g., citrus fruits, curd etc. and condemned as they cause colds and coughs. However, this is not so because colds and coughs are respiratory viral infections and these foods could have aggravated the condition that already exists, as viruses thrive in cold and acid medium.

Similarly, peanuts, an excellent source of cheap proteins is avoided because, the thin brown skin causes irritation in the throat, when removed and eaten, will not do so. There are various other beliefs about foods which may or may not be eaten during pregnancy and lactation. Women should be convinced of the fact that the diet during lactation only influences the nutrients in the milk and such qualities as the tendency of certain foods to form gas are not transmitted through the milk to the nursed infants.

- The trend in urban families to bottle feed instead of breast-feeding infants is alarming and should be checked. Breast feeding is best for the infant in terms of nutrition, economy, and hygiene. However, the practice of solely breast feeding an infant up to the age of 12-18 months needs to be modified. Mothers should be encouraged to add foods to the infant’s diet which will provide him the nutrients required during this period of rapid growth.

- Beef is difficult to digest or is “hot” as compared to mutton, and thus eating beef is a taboo in many communities. Again, there is no scientific basis for this belief. Since protein foods are lacking in many homes, this belief is particularly harmful as it prevents the consumption of beef.
- Since most families have limited food budgets it is important that they get the maximum benefit for their money. Over cooking of food especially vegetables and the throwing away of water in which rice is cooked are two food preparation practices which are common is many homes. These result in a loss of nutrients and should be changed.
- Eating fish along with milk or its products is considered to cause leucoderma and hence is a taboo. This statement is false; but nutritionally speaking, combination of fish and milk is over lapping of proteins as both the foods are sources of good animal proteins and instead of being used together, they could be used separately / the next day for economic reasons as well.
- Eating chips with beverages and other fast foods daily is a fad in many rich families as a result the growth and health of children suffers since their diet is devoid of valuable nutrients like proteins, minerals and vitamins.

EFFECT OF COOKING ON THE NUTRITIVE VALUE OF FOOD:

Raw foods are unpalatable and indigestible whereas cooking makes them otherwise and helps in destroying the pathogenic organism. Incorrect procedures adopted in preparing the foods result in nutrient loss even before the food is cooked.

Preparation Losses:

The skins on the fruits and vegetables protect the minerals and vitamins from oxidation. If the skins are removed, then the fruit must be eaten straight away or kept covered in a cool place to avoid the losses of vitamin A, vitamin C and Thiamine by exposure.

Green leafy vegetables must be eaten fresh. Wilted leafy vegetables lose 50% of their water-soluble minerals and vitamins. While preparing the leafy vegetables, first they should be washed, then chopped and cooked immediately, but never washed or soaked after cutting or chopping.

Certain fruits and vegetables turn brown after being cut. It is better to have them discoloured than to lose their sugar, minerals and vitamins in the water.

Fruit juices must not be left exposed. They must be taken immediately to avoid vitamin C losses. Certain dry fruits and vegetables like apricots, beans, pear, etc. need to be soaked to cut down the cooking time. The water used for soaking should be sufficient for it to be absorbed and cooked in it and must not be discarded or replaced with fresh water.

Cooking losses:

Proteins, fats and carbohydrates are not destroyed by heat unless the foods are burnt or the oil is heated too much, then it gets toxic, and fumes come off. Minerals and vitamins are destroyed by heat.

Boiling of vegetables causes nutrient loss. To avoid this loss, vegetables must be added to salted water. Just enough quantity of water should be used to cook the vegetables. Similarly, cooking of rice in excess water causes loss of thiamine, which can be avoided by cooking rice in sufficient quantity of water so that the water is absorbed and there is no excess to be discarded.

Frying of foods causes little loss. Fried food tastes better than boiled as the natural sugars are not lost due to cooking; but they should not be fried at very high temperatures which may result in over fried food and oxidation of the fat used for frying. It is a common practice to salt certain vegetables before pickling, this results in loss of flavour and the nutritive value as the juice is drawn out from the cut vegetables. Use of baking soda for cooking dried beans results in a total loss of the vitamins B and C.

Since cooking involves the application of heat, the following rules should be observed to reduce the nutrient losses:

- While frying, keep the oil hot initially and then lower the heat.
- While cooking, keep the heat high initially and then cook on a low flame.
- Do not stir often and keep the pots covered to avoid vitamin losses due to exposure.
- Do not overcook or burn the dish as the nutrients will either be destroyed or burnt.
- For cooking dried foods, soak them over night and then cook in the same water initially on high, then a low flame with a cover on the pan.
- Vitamin A and C are destroyed if tomatoes, leafy vegetables are poured while hot.
- Cut the vegetables in slightly bigger pieces to avoid vitamin loss.

Effective and Economical Foods for Health:

The community should be mobilized to grow fruit trees like date-palm banana, guava, beir, papaya etc. vegetables like swanjani ki phalli (drumsticks), lauki, torai, palak, tomatoes, chilies, methi, dhania and podina can be grown over walls, fence and in small pots or pans.

Use plenty of dry foods like beans, peas, dals, fish, prawns, chana peanuts, dried fruits, sesame seeds (Til).

Sprout chana or moong beans can be eaten raw, sprinkled with salt and chilli powder for its vitamin B complex, vitamin C, protein and calcium content.

Herbs, like mint, coriander and green chillies in their fresh forms are good sources of vitamins A, C, iron and calcium.

Home made candy of jaggery and peanuts, or chana or til may be given to children as snacks or between meals; for energy, proteins, iron, calcium and vitamin A.

FOOD PRESERVATION:

Foods like fruits and vegetables are sometimes bought in bulk during the season for economy; but since they have a short shelf-life, either they must be consumed immediately

or stored temporarily or permanently, without letting them spoil. Foods can be stored temporarily for 2-4 days by keeping them in a cool dry, ventilated place so that the fruits are kept fresh and are not infected with any micro-organism which causes the fruits / vegetables to rot. Foods can be stored for longer periods by preserving them. This is a traditional method, developed over the centuries, when man wished to store foods that were surplus during certain season. Foods can be preserved by the following methods:

Dehydration:

This is one of the oldest methods of preservation. The food is exposed to air and sunshine to dry or hung near the fire to dry. Drying excludes all the moisture, hence the food does not spoil. Some of the common examples of air-dried foods are dried meat, (dried near fire) fish, prawns, peas, beans, palak, methi, mint, cabbage, bhindi, cauliflower, karela, carrots, potatoes and raddish.

Method:

Clean, sort and wash all green leafy vegetables.

Peel and cut potatoes, raddish, carrots, karela, beetroot and bhindi into large pieces / strips or slices.

Shell peas, chick peas, green channa etc. and vegetables are tied in a loose muslin cloth and immersed in salted boiling water for blanching for the time indicated:

Potatoes	**---**	**10 minutes**
Karela	---	8 minutes
Carrots	---	6 minutes
Raddish	---	5 minutes
Cauliflower	---	5 minutes
Palak	---	4 minutes
Bhindi	---	3 minutes
Peas	---	3 minutes
Methi	---	3 minutes
Cabbage	---	2 minutes

The blanched vegetable is immediately dipped in cold water and then in 1% solution of

sodium meta bisulphate for five minutes, drip dried and spread over a tray and covered by a muslin cloth to protect from flies and dust for 3-4 days till they are dry. When a handful of dried vegetable are crumpled in the hand, the vegetable pieces should not adhere to each other. Pack them in clean airtight containers. Soak the dry vegetables in lukewarm water before use.

Salting:

Salt inhibits the growth of microorganisms, dehydrates the food and does not cause the food to spoil due to the action of the enzymes. Salt is added directly to the food or the food may be preserved in salt solution. Foods that can be salted and preserved are fish, meat, fresh beans, lime etc. Fish and meat are cleansed, sprinkled with salt and packed in jars alternated with a thin layer of salt and left in a cool place. The whole limes are salted, put in jars left in the sun for curing.

Sugaring:

Sugar is also an effective preservative. Fruits are preserved in sugar in the form of murrabas, jams, jellies etc. Fruit pulp and sugar by equal weight are cooked together and lime juice is added if required.

Fruit juices are also preserved in the form of squashes, in which, juices, sugar and water are mixed by equal weights and a preservative is added.

Pickling:

Oil, vinegar and spices are used for preservation of certain fruits in the form of chutneys and vegetables in the form of pickles.

While preserving foods by any of the methods mentioned above, the general rules to be observed are:

- Fruit / vegetable for preservation must be fresh, firm, ripe and not over ripe or rotten.
- Fruit / vegetable must be thoroughly cleaned.
- Utensils and hands must be clean.
- Fruit/vegetable must not be preserved in metal containers. Use plastic, glass or earthenware.

Note: During the Nutrition Education Classes, women who have mastered the art of preservation can give a practical demonstration for the benefit of the other women of the community, based on the local recipe.

5.10 SUSTAINABLE DEVELOPMENT GOALS

5.10 SUSTAINABLE DEVELOPMENT GOALS (SDG)

In 2015, 195 nations agreed with the United Nation that they can change the world for the better. This plan was going to be accomplished by bringing together their respective governments, businesses, media, institutions of higher education, and local NGOs to improve the lives of the people in their country **by the year 2030**.This plan was given the title of Sustainable Development Goals.

The 17 sustainable development goals (SDGs) to transform our world:

GOAL 1: No Poverty

GOAL 2: Zero Hunger

GOAL 3: Good Health and Well-being

GOAL 4: Quality Education

GOAL 5: Gender Equality

GOAL 6: Clean Water and Sanitation

GOAL 7: Affordable and Clean Energy

GOAL 8: Decent Work and Economic Growth

GOAL 9: Industry, Innovation and Infrastructure

GOAL 10: Reduced Inequality

GOAL 11: Sustainable Cities and Communities

GOAL 12: Responsible Consumption and Production

GOAL 13: Climate Action

GOAL 14: Life Below Water

GOAL 15: Life on Land

GOAL 16: Peace and Justice Strong Institutions

GOAL 17: Partnerships to achieve the Goal

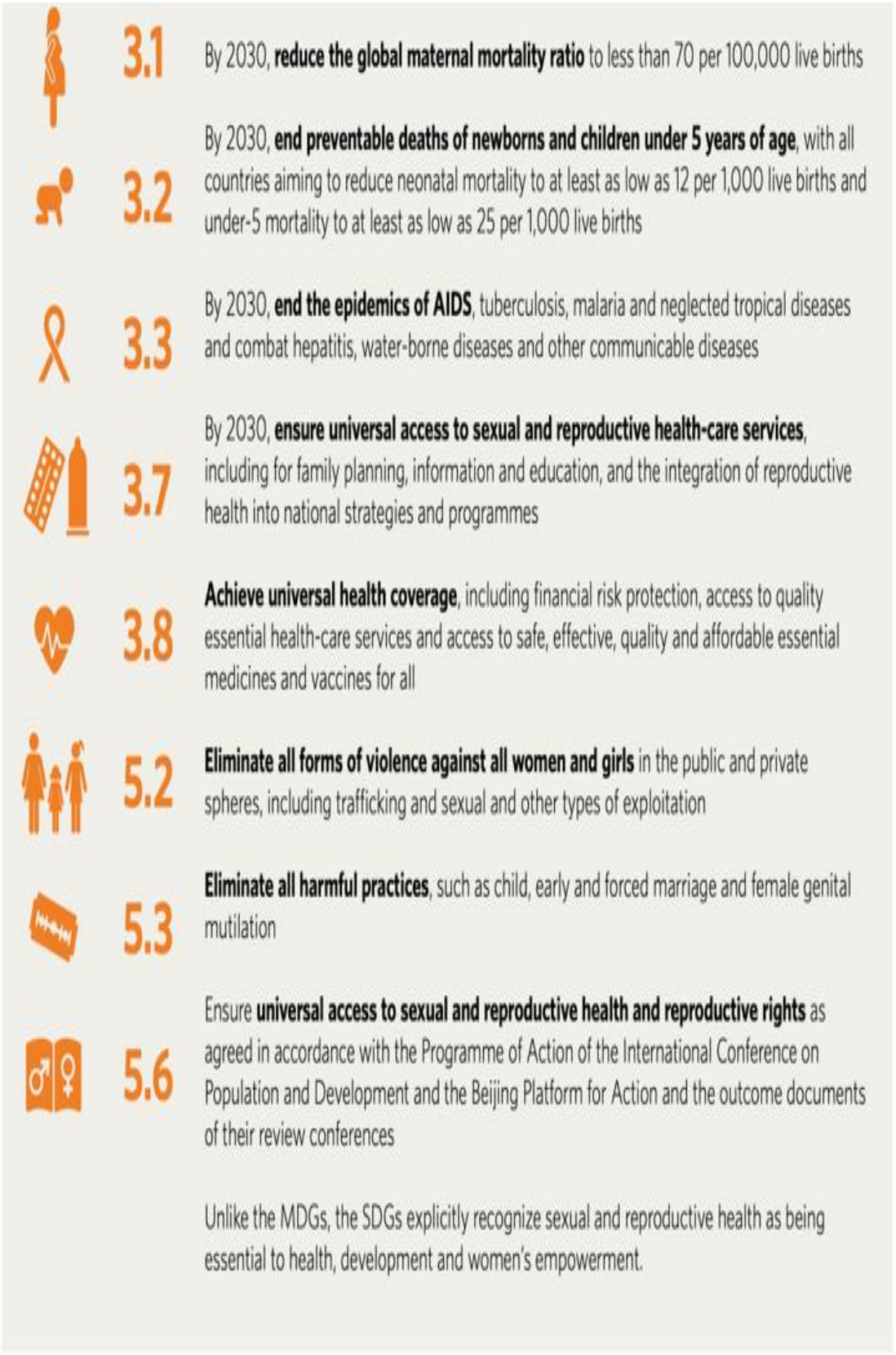
Here's how they look like in pictures:

Each goal typically has 8-12 targets, and each target has between 1 and 4 indicators used to measure progress toward reaching the targets. The targets are either "outcome" targets (circumstances to be attained) or "means of implementation" targets.

Goal 17 is wholly about how the SDGs will be achieved

As is clear from the above that all these goals are very important for the health and development of a nation, a few goals have direct relevance to women, girls and children's health and well-being.

KEY SEXUAL AND REPRODUCTIVE HEALTH AND UNIVERSAL HEALTH COVERAGE TARGETS IN THE SDGs:



Goal 1 END POVERTY IN ALL ITS FORMS EVERYWHERE

TARGETS

1.1

By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day

1.2

By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions

1.3

Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable

1.4

By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance

1.5

By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters

1.a

Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions

1.b

Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions

Goal 2 END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

TARGETS

2.1

By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round

2.2

By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons

2.3

By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

2.4

By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

2.5

By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed

2.a

Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries

2.b

Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round

2.c

Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility

Goal 3 ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

3.1

By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births

3.2

By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births

3.3

By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases

3.4

By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

3.5

Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

3.6

By 2020, halve the number of global deaths and injuries from road traffic accidents

3.7

By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes

3.8

Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

3.9

By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

3.a

Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate

3.b

Support the research and development of vaccines and medicines for the communicable and

non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all

3.c

Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

3.d

Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Goal 4 Quality education

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

TARGETS

4.1

By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

4.2

By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education

4.3

By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university

4.4

By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

4.5

By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations

4.6

By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy

4.7

By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development

4.a

Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all

4.b

By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries

4.c

By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States

Goal 5 ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

TARGETS

5.1

End all forms of discrimination against all women and girls everywhere

5.2

Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation

5.3

Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation

5.4

Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate

5.5

Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life

5.6

Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences

5.a

Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws

5.b

Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women

5.c

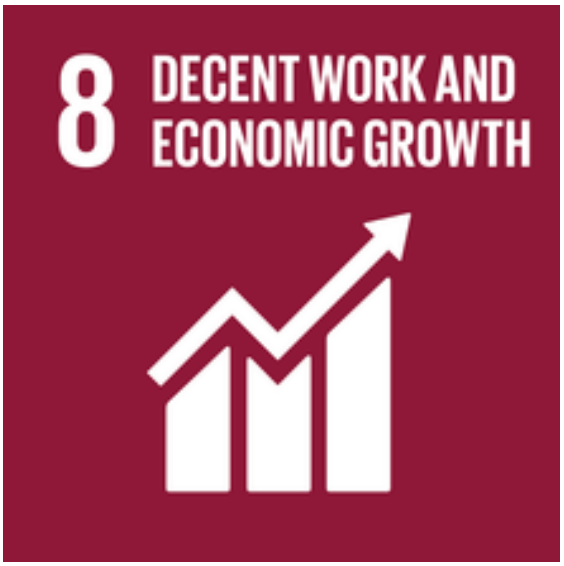
Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

Goal 6 ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER
AND SANITATION FOR ALL

Goal 7 ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL

Goal 8 PROMOTE SUSTAINED, INCLUSIVE

AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL



Goal 9 TO"BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE

AND SUSTAINABLE INDUSTRIALIZATION, AND FOSTER INNOVATION

Goal 10 Reduce inequality within and among countries

Goal 11 Make cities and human settlements inclusive, safe, resilient and sustainable

Goal 12 Ensure sustainable consumption and production patterns

Goal 13 "TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS BY REGULATING EMISSIONS AND PROMOTING DEVELOPMENTS IN RENEWABLE ENERGY

Goal 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Goal 16 TO: "PROMOTE PEACEFUL AND INCLUSIVE SOCIETIES FOR SUSTAINABLE DEVELOPMENT, PROVIDE ACCESS TO JUSTICE FOR ALL AND BUILD EFFECTIVE, ACCOUNTABLE AND INCLUSIVE INSTITUTIONS AT ALL

Goal 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

PAKISTAN'S COMMITTMENT

Pakistan has prioritized the Sustainable Development Goals which will enable us to join the league of upper middle-class countries by 2030. Pakistan was the first country to adopt SDGs 2030 agenda through a unanimous resolution of parliament.

The government conducted discussions on post-Millennium Development Goals (MDGs) with all stakeholders for coordinating and strengthening efforts at federal and provincial levels to achieve Pakistan's sustainable development and poverty reduction targets. The consultation process emphasized the need for national categorisation of SDGs, improved data collection and enforcement of monitoring mechanisms, he said.

The seven pillars of Vision-2025 are fully aligned with the SDGs, providing a comprehensive long-term strategy for achieving inclusive growth and sustainable development. At the federal level, a SDGs Monitoring and Coordination Unit, in coordination with UNDP, isbeing set up to serve as a national coordinating entity with similar units in the provinces.

Pakistan government has designed and approved a National SDGs Framework that envisages a national vision to prioritize and localize SDGs. The country is making all possible efforts to establish institutional mechanisms in line with the 2030 Agenda. Pakistan has a firm stance on strengthening institutions, ensuring meritocracy and introducing transparency at all levels.

With the establishment of federal and provincial SDG units, Pakistan has instituted monitoring and evaluation processes that are critical for supporting the SDGs' implementation, horizontal and vertical coordination, and strengthened collaborations with development partners, civil society organizations, think tanks, academia and the private sector. To ensure an enabling institutional environment, Parliamentary Taskforces are operating in national and provincial assemblies, closely overseeing progress on the SDGs. All such efforts are expected to accelerate the pace of Pakistan's progress on the SDGs.

A key aspect of implementation strategy is strengthening of the existing and forging new alliances, leveraging technology and mobilizing finance. Partnership and close collaboration with a broad array of governmental, private, civil society and media actors, supplemented by regional and international support, will continue to be a major feature.

Ambitious plans to alleviate poverty

Commitment to poverty alleviation remains a key focus. Through key interventions and programmes, progress has been made even if challenges persist. Over the last ten years, poverty headcount has fallen by 26 percent and multi-dimensional poverty decreased by 16 percent points.

A national poverty alleviation program – Ehsaas (Compassion) has been launched this year to expand social protection, safety nets and support human capital development throughout the country. This programme complements and expands the on-going robust social protection program for poor women.

The national resolve to eliminate poverty is firm. The size of assistance for the lowest strata has been enhanced. The National Socioeconomic Registry (NSR) is being updated to target the poorest more effectively and ensure that no one is left behind.

Committed to eliminating hunger and improving health

Reductions in stunting and malnutrition have taken place - over the period 2013-2018 by 6 and 9 percentage points, respectively. Recognizing the persistent challenge, greater focus and allocation of resources is being made.

The prevalence of skilled birth attendance has improved by 17 percentage points while neonatal mortality rate has fallen by 10 percentage points during the same period. The Lady Health Workers Programme, with its grassroots presence, has been instrumental in achieving this improvement.

A new universal health coverage initiative – the Sehat Sahulat Program - has been launched this year to provide health insurance coverage for those in need. Health Sector reforms are underway, entailing a centralized integrated disease surveillance system and strong inter-provincial information sharing mechanism.

Pakistan has commenced actions to both protect the environment and contribute towards efforts to minimize the adversaries of climate change. Both adaptation and mitigation are reflected in our policy and implementation approach.

Moreover, programmes such as Clean and Green Pakistan as well as Recharge Pakistan have been launched. These Nature Based Solutions for Ecosystem Restoration are leading examples of climate action among developing countries, with co-benefits to improve biodiversity and livelihood generation.

Monitoring and evaluation

Periodic monitoring and evaluation of various strands of the SDGs framework remains an important priority. Baselines and targets for all SDG indicators have been determined since

2018. National data collection tools have been modified to improve data availability with a focus on equity and sustainability aspects of SDGs. Transparency would be a major hallmark of the monitoring and evaluation architecture- through the establishment of SDGs Dashboard.

5.11 IMPROVING REPRODUCTIVE HEALTH

5.11 IMPROVING REPRODUCTIVE HEALTH

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

Reproductive health therefore implies that people can have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the right of men and women to be informed of and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility, which are not against the law, and the right of access to appropriate health care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant.

Reproductive Health encompasses all members of the family with the man playing a central role and does not apply to the woman alone as is generally believed. The death of a woman in reproductive ages translates into hardships for her family as well as the community. The continuum of Reproductive Health Care, as aptly put by the World Health Organization, extends from the beginning of human life through to the end of reproductive period.

ICPD - PROGRAM OF ACTION

At the International Conference on Population and Development 1994 organized under the auspices of United Nations, more than 180 States (including Pakistan) took part in negotiations to finalize a Program of Action in the area of Population and Development for the next 20 years. The strategy explicitly places human beings, rather than human numbers, at the centre of all population and development activities. It recognizes that early stabilization for world population is essential for achieving sustainable development, but it also recognizes that stabilization could only be achieved by focusing on meeting the needs of individuals and by ensuring full and equal participation of women in all aspects of development.

The new direction is the shift from the focus on fertility towards a comprehensive approach integrating family planning with reproductive health and addressing wider range of concerns, especially economic status, education and gender equity and equality. Goals are set in three related areas:

1) Increased access to quality reproductive health services, including family planning.
2) Make reproductive health care and family planning accessible through primary health care system to all individuals of appropriate ages no later than 2015. The ICPD sets out quantitative goals specially for tackling high maternal and infant mortality and morbidities.
3) Expanded access to education, particularly for girls, reduced illiteracy rates.

The four main areas of efforts to improve RH include:

- Family planning

- Adolescent sexual and reproductive health
- Unsafe abortion
- Violence against women.

FAMILY PLANNING:

We can through look at the advantages of family planning the following perspectives.

- Development or demographic rationale
- Maternal and child health
- Human rights and equity
- Environment and sustainable development

POPULATION:

Positive links between slower population growth and economic development—at least in the initial phase of the demographic transition, when countries enjoy a demographic dividend, if other economic and human capital policies are in place. The demographic dividend allows countries to take advantage of a beneficial dependency ratio between the working-age population and the groups who need support, that is, children and the elderly

MATERNAL AND CHILD HEALTH RATIONALE:

These reasons ranked higher than fertility reduction, economic development, and reduction of childbearing among unmarried youth. Contraception can serve as an effective primary prevention strategy in LMICs to reduce maternal mortality. By one estimate, increases in contraceptive use from 1990 to 2008 contributed to 1.7 million fewer maternal deaths. Reductions in fertility rates accounted for 53 percent of the decline in maternal deaths; lower maternal mortality rates per birth accounted for 47 percent of the decline

Family planning can have significant effects on the health of children. Analysis of data from Demographic and Health Surveys (DHS) from 52 countries showed that children born within two years of a previous birth have a 60 percent increased risk of infant death, and those within two to three years have a 10 percent increased risk of infant death, compared with children born after an interval of three or more years from the last sibling. These analyses have confirmed the usefulness of program initiatives to promote healthy timing and spacing of birth

Human Rights and Equity Rationale

The right of couples and individuals to decide freely and responsibly on the number and spacing of their children was articulated at the 1968 International Conference on Human Rights Subsequent international population conferences in 1974, 1984, and 1994 reaffirmed this right

The human rights rationale has focused on sexual reproductive health and rights, with family planning implicitly included. Efforts are underway to define a rights-based approach more explicitly to implementing voluntary family planning programming. Ensuring equity is a

fundamental principal of human rights–based programming. Wealth quintiles analysis has shown that wealthier women have lower fertility rates and better access to family planning than poorer women.

Environment and Sustainable Development Rationale

A resurgence of interest in global population dynamics is linked to growing attention to environmental issues, climate change, and concerns about food securit

According to the United Nations Population Fund (UNFPA), “Whether future demographic trends work for or against sustainable development will depend on policies that are put in place today”.If the unmet need for family planning services were satisfied in all countries, world population growth would fall between the UN’s low and medium projectionsThe risk of maternal mortality is particularly high for older women; it is typically two to three times higher for women over age 40 years who give birth than for those ages 35–39 years

High-parity births (fourth and higher births) may also carry an increased risk.Family planning also influences child survival rates. Child mortality rates are generally higher for high-risk births, typically defined as births of order four (a woman’s fourth birth) and above, births occurring less than 24 months after a previous birth, and births to mothers who are less than age 18 years or more than age 35 years. Short birth intervals, young age of mother at birth, and parity greater than three are associated with greater chances of births that are preterm, low birth weight, and small for gestational age

Mortality rates are about 50 percent higher for closely spaced births and births to mothers under age 18 years. The largest effects occur when multiple risk factors are combined. Mortality increases by 150 percent to 300 percent for births with short intervals to very young mothers and those with high parity and short birth intervals.

Public, nongovernmental, and commercial providers.

Funding for public family planning programs comes from a variety of sources. Many middle-income countries fund contraceptive services, along with all other health services, out of tax revenues. Low-income countries often rely on donor funding for commodities, training, research, policy reform, evaluation, and service delivery outside the health facility. Many LMICs have provided line items in their budgets for family planning commodities. Even in low-income countries, national governments provide most of the funds for infrastructure and personnel.

Integration with other sectors.

Family planning services are usually integrated with other health services. Activities for outreach, advocacy, the building of political commitment, and resource mobilization are often integrated with other development priorities, such as HIV prevention and treatment, child immunization, and environmental protection.

Community-based programming.

Community-based programming has been part of family planning programs since the 1970s. CBD was designed to extend the reach of clinics to serve clients who were unable to travel

to clinics or who did not know about clinic services for family planning. CBD programs focused on rural areas and trained community members to provide family planning information and selected resupply methods. Under various names, including *community-based distributor, community health worker*, and *health extension worker*, this cadre of staff has delivered information and selected services to families' doorsteps, providing access for women with limited mobility and those at a distance from clinical services.

SECTION SIX

QUALITY OF CARE IN REPRODUCTIVE HEALTH

6.1 QUALTY OF CARE IN REPRODUCTIVE HEALTH

QUALITY OF CARE

Providing high-quality of care in reproductive health and family planning services is the basic aim of health care delivery program.

Recently there is an awareness of the significant role that quality-of-care plays in Family Planning and other RH services. Regardless of the level of care provided by a program, there is always room for improvement. There is no upper limit to standards of quality and thus no fixed or absolute level can be set for it. On the other hand, it is necessary to set the minimum achievable standards. This chapter provides a framework to supervisors for assessing the level of quality of care at FWCs and other facilities. The same framework can be used by Family Welfare Workers for self-monitoring and assessment.

BENEFITS AND IMPORTANCE OF QUALITY OF CARE (QOC)

Based on several definitions in the literature, the WHO definition of quality of care is “the extent to which health care services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care must be safe, effective, timely, efficient, equitable and people centred.”

The care should be

- **Safe.** Delivering health care that minimizes risks and harm to service users, including avoiding preventable injuries and reducing medical errors.
- **Effective.** Providing services based on scientific knowledge and evidence-based guidelines.
- **Timely.**

Reducing delays in providing and receiving health care.

- **Efficient.** Delivering health care in a manner that maximizes resource use and avoids waste.
- **Equitable.**

Delivering health care that does not differ in quality according to personal characteristics such as gender, race, ethnicity, geographical location, or socioeconomic status.

- **People-centred.**

Providing care that considers the preferences and aspirations of individual service users and the culture of their community.

QUALITY OF CARE IN REPRODUCTIVE HEALTH

Quality means offering the maximum health benefits, with the minimum health risks, to a large number of people, given the available resources. Good quality also may mean meeting minimal standards for adequate care or achieving high standards of excellence. Quality not only means technical quality of care, but also implies the non-technical aspects of service delivery such as clients' waiting time and staff's attitudes, and to programmatic elements such as policies, infrastructure, access, and management.

IMPORTANCE OF QUALITY CARE

Quality health care attracts clients to clinics and keeps them coming back. It increases job satisfaction, motivates health workers, and minimizes waste of valuable resources. Quality family planning and reproductive health helps client to choose an appropriate contraceptive method, use it correctly, be aware of side effects, and discuss related reproductive health issues openly with the provider resulting in improving reproductive health status.

BENEFITS OF GOOD QUALITY

Assuring good quality of services is an ethical obligation of health care providers. The benefits are for both the staff and the patients and include:

Safety and Effectiveness:

Good-quality care makes contraception safer and more effective. While on the other hand poorly delivered family planning services can cause infections, injuries, and other complications thus leading to inappropriate, inconsistent, or discontinued contraceptive use leading to unwanted pregnancies.

For ensuring efficacy and safety, service provider should:

- Offer a range of methods;
- Inform clients about methods, including possible side effects;
- Screen clients for medical eligibility;
- Help clients choose methods that suit their individual circumstances;
- Teach clients how to use the chosen method properly
- Support clients when they face problems or to decide to switch methods.

Greater Client Satisfaction And Continuation:

Quality care attracts, satisfies, and keeps the clients by offering them services, supplies, information, and emotional support they need to meet their reproductive health goals.

Family planning clients may discontinue their method or stop using family planning altogether if:

- Correct use of method is not explained, and unintended pregnancy occurs
- Managed inappropriately
- Facility runs out of supplies;
- Providers treat clients rudely
- Clients cannot get the services they want

Wider Use of Contraception:

The quality-of-care influences contraceptive prevalence and there is evidence that satisfied clients use the best propagates of services they received.

More Job Satisfaction for Providers:

Providers derive greater personal and professional satisfaction from their jobs when they offer good-quality care and can feel their work is valuable and benefiting the communities.

Better Program Image and Competitiveness:

Programs known for good quality attract and retain clients and become compete well for in-service delivery. Good quality programs improve the public perception of RH program and enhance its competitiveness and image.

Enhanced Access to Services:

Most health and family planning programs are built on the premise that people have a fundamental right to health care and ensure that everyone has access to health services. Quality of care is closely linked to accessibility. Improving the quality of services helps programs pursue their goal of making services universally available.

6.2 ELEMENTS OF QUALITY OF CARE

6.2 ELEMENTS OF QUALITY OF CARE

Quality of care is also a key component of the right to health, and the route to equity and dignity for women and children. In order to achieve universal health coverage, it is essential to deliver health services that meet quality criteria.

QUALITY OF CARE FRAMEWORK

A framework of six salient elements of reproductive health and family planning programs which constitute quality are given below. These elements reflect six aspects of services that clients experience as critical. This framework is meant to provide point of departure, to develop a description of a service unit and define its quality. The six elements are:

- Choice
- Effective communication for Informing and counselling clients
- Technical competence of staff
- Good interpersonal skills
- Mechanism to encourage continuity
- Appropriateness and acceptability of services

1 CHOICE

Clients, who can afford to, often seek services through the private sector, based on the common perception that they will receive superior care. Clients may seek specific services in the private sector. Women in Pakistan, who experienced a problem during pregnancy were more likely to seek care at a private facility, even while receiving routine care through the public sector.

The attitude of the providers and the convenience is also a factor in not using the public facilities

For FP choice of methods refers both to the number of contraceptive methods offered on a reliable basis to the clients, to be defined by age, gender, contraceptive intention, lactation status, health profile, and income groups. A choice of methods is important to respond to the user's needs since individuals and couples pass through different stages in their reproductive life cycle. They may desire to delay childbearing, to space pregnancies, and finally, to terminate childbearing. The choice of method used by the client is based on the complete information given by the service providers in accordance with the needs and desire of the client.

2 EFFECTIVE COMMUNICATION

Experience of quality care requires effective communication—a woman (or her family if required) should feel that she understands what is happening to her and her baby and what to expect and know their rights. Both a woman and her baby should receive care with respect and dignity, and a woman and her family should have access to the social and emotional support of their choice.

Information provided should be technically sound and to the satisfaction of the clients. It includes information about methods available, indications and contraindications, advantages, and disadvantages and screening out specific client for safety measures.

- Client's needs are given priority.
- Clients are enabled to make informed, voluntary and well-considered decisions.
- Responsibilities of the various staff members involved in counselling are to be clearly defined.
- Counsellors and counselling supervisors are well trained.
- Counselling is conducted in comfortable settings that protect the client's privacy and confidentiality.
- Counsellors have the support materials they need and have been trained to use them.
- Records are simple and easy to keep, yet provide the program the information it needs to monitor the quality of counselling.
- Counsellors are regularly supervised with the purpose to improve counselling, rather than to criticize staff members.
- Counsellors have the full support of family planning program managers and policy-makers, as indicated by an adequate commitment of resources for personnel training, supervision, space, and materials.
- Perhaps more significant in terms of reducing maternal morbidity and mortality, few women received information regarding important warning signs of complication.

Counselling is very important for the antenatal and post-natal services too. The health care worker while counselling should ask the woman about contraceptive methods that she may have used previously, especially important for the women who had abortions. Specific attention should be paid to woman who was using a contraceptive method, but she became pregnant. If the woman selects the same method after pregnancy/abortion, the counsellor should identify potential problems and provide information on alternative method or to use same method correctly.

3 COMPETENT AND MOTIVATED STAFF

Quality provision of care for pregnant women and newborns in health-care facilities requires competent and motivated health-care professionals and the availability of essential physical resources, such as clean water, essential medicines, equipment, and supplies. In addition, evidence-based practices for routine and emergency care require functional referral systems between levels of care, as well as information systems that enable review and audit to take place.

The term "technical competence" is used to describe the collective proficiency with which all members of the health care team perform the tasks of counselling and delivering family planning services to clients. Technical competence is an integral part of the quality services as it is the most basic requirement for the safety of services. The cornerstone of technical competence is the skill and knowledge of individual providers. Training and supervising staff,

monitoring and reviewing service statistics, developing and adhering to relevant protocols, and providing feedback to personnel are mechanisms that foster technical competence of the entire team.

Up-to-date service delivery protocols are necessary to ensure that women are not needlessly denied methods that are appropriate, as well as to ensure that they are not given methods that are inappropriate. the overuse of potentially harmful procedures (such as routine episiotomy and speeding delivery with the use of oxytocin) and the low utilization rates of essential diagnostic technologies (such as routine blood pressure checks and tetanus vaccination) are not uncommon.

4 INTERPERSONAL RELATIONS:

Observers note that providers give differential treatment to clients based on age, social class, or cultural or economic status. Many people report differential treatment based on their perceived ability to pay. For example, providers would not bother referring a client for antenatal care, treatment or contraceptives if the provider felt the client could not pay for such services. Relationship between providers and clients is strongly influenced by a program's mission and ideology, management style, resource allocation (for example, patient flow in clinical settings), the ratio of workers to clients, and supervisory structure.

People seeking health care services, curative and preventative, should be treated professionally and non-judgmentally. Provider attitudes profoundly affect interaction with patients, counselling, and selection of methods. Family planning counselling requires an open exchange of information to help women select methods that are appropriate for their individual situations. This communication is not possible if providers treat patients in a judgmental manner.

5 CONTINUITY OF SERVICES:

A key component to provision of comprehensive sexual and reproductive care is identification of appropriate linkages among services and maintenance of reliable referral systems. Integration of sexual and reproductive health services that are acceptable to clients is thought to result in cost savings to both the client and the health system, and has the potential to increase the efficiency of the consultation process. An example of integrated service delivery – integration of family planning counselling into other sexual and reproductive health services. Consistent with findings presented previously, evidence shows substantial missed opportunities for provision of contraceptive counselling within relevant sexual and reproductive health services.

Community engagement is also central to improving quality of care. The perspectives of women, their families, and communities, on the quality of services influence their decisions to seek care. Engagement of facility service providers with the communities they serve – so that they can understand their expectations, build trust and engage them in the process of delivery – is an essential component for creating demand for and access to quality maternal and newborn services.

Continuity is an essential component of all RH and FP services. The quality of care for women and newborns is therefore the degree to which maternal and newborn health services (for

individuals and populations) increase the likelihood of timely, appropriate care for the purpose of achieving desired outcomes that are both consistent with current professional knowledge and consider the preferences and aspirations of individual women and their families.

The job of providing family planning services does not end when a woman has selected and begun to use a method. Continuity of family planning care means that women need access to the services and supplies that will enable them to continue a chosen method, to receive follow-up treatment in case of complications, to address any concerns about the method that arise, to change methods, and to discontinue use. To set a pattern of continuity, it is necessary that the woman be referred to a family planning clinic or some other appropriate facility near her home. It is important that providers should also guide and refer clients for a broad range of services. These services may include diagnosis or treatment of RTI, STI and HIV & AIDS, cancer screening, prenatal care, treatment of infertility, and appropriate social services.

6 APPROPRIATENESS AND ACCEPTABILITY OF SERVICES:

This element of quality refers to the organization of services so that they are convenient and acceptable to clients, respond to the cultural concept of health, and meet the health needs of the communities they serve.

Financial considerations appear to play a significant role in the decision of where women seek care. Inability or unwillingness to pay for services leads some individuals to turn to more traditional and usually less-effective, even unsafe, means of treatment Often women could not afford safe services, especially younger and unmarried women with less access to financial support. Availability of female providers was also highlighted as an important issue for women in many settings.

Refers to situating family planning services so that they are convenient and acceptable to clients, responding to their natural health concepts, and meeting pressing pre-existing health needs. Services can be appropriately delivered through a vertical infrastructure, or in the context of MCH initiatives, postpartum services, comprehensive reproductive health services, employee health programs, or others

6.3 METHODS OF QUALITY ASSURANCE

6.3 METHODS OF QUALITY ASSURANCE

KEY ELEMENTS OF QUALITY IN FAMILY PLANNING

Systematic methods of quality assurance in family planning and reproductive health care are still evolving in both developed and developing countries. Good quality requires a client-centered perspective that helps define quality and set program objectives and standards:

Client-Centered Care:

Putting clients first is key to improving the quality of health and family planning services. Planners, managers, and providers can design and offer services that both meet medical standards and treat clients as they want to be treated. Most service providers have assumed that they, as health care experts, know what is best for clients, but the clients' concerns and preferences also are valid and important.

Meeting the Needs of the Clients:

Good quality results in greater increases in client flow at clinics that meet quality standards. In both developed and developing countries, clients share seven major concerns in judging the quality of RH services. These are:

Respect:

Clients want to be treated with respect and friendliness. Clients demand courtesy, confidentiality, and privacy at the service outlets.

Understanding:

Client’s value individualized service and prefer providers who make efforts to understand their situation and needs. They want providers to listen to them, to explain options in terms that they understand, and to assure them that problems can and will be taken care of.

Complete and accurate information:

Clients value information. They want family planning providers to tell all the details, including side effects of contraceptive methods.

Technical competence:

Clients can and do judge the technical competence of the services they receive, although they may not use the same criteria as providers, and they may not be technically accurate. Ultimately, clients judge technical competence by whether their needs are met, or their problems are resolved.

Access:

Family planning clients want ready access to contraceptive services and supplies. A convenient location and prompt service are important, but access also means that services are reliable, affordable, and without barriers. For example, access is compromised when Community Based Distribution (CBD) workers fail to return as scheduled, facilities run out of

supplies, or providers turn people away without counselling or care.

Fairness:

Clients want providers to offer thorough information and services to everyone without discrimination.

- **Results:** If the service provider is not well versed will all the components it will result in dis-satisfaction of clients

Changing Provider Attitudes:

A client orientation is especially crucial to counselling because counselling provides the foundation for informed choice, which is a hallmark of good quality of care in family planning. Many providers think that they know what is best for clients because they have more expertise, more education, or higher social class than the clients. They may doubt clients' ability to make wise choices. Therefore, many providers control counselling sessions; they ask all the questions and give directions. They do not encourage clients to participate. As a result, providers do not learn enough about clients' situations to advise them well, and clients may not learn enough to make appropriate decisions. Some clients may simply agree to whatever the provider suggests.

In contrast, “client-centred” counselling calls for providers to respect each client’s knowledge of her or his own situation and to use their professional expertise to help the client make well-informed decisions. Providers encourage each client to talk about her or his concerns. For example, in the 6-step GATHER approach to family planning counselling, the second step is to ask the client about her or his needs, wishes, and circumstances. This information permits providers to recommend practices, behaviour, and methods that are safe, appropriate, and feasible for that individual. Providers personalize information and instructions so clients can relate them to their own lives.

Satisfying Clients:

Clients' satisfaction greatly influences their behaviour, and it is a worthwhile program goal. Client satisfaction may influence whether:

- They go for care,
- They are willing to pay for services,
- People in need of family planning adopt a contraceptive method,
- Clients follow the provider's instructions on correct use,
- Clients continue using the method,
- They return to the provider,
- They recommend services to others

When clients' perceptions of quality are inaccurate, their expectations can influence providers' behaviour and lower the quality of care. AT times clients want inappropriate tests, procedures, or treatments in the mistaken belief that they constitute good quality. Counselling

clients and informing the public about what constitutes appropriate care are often important aspects of providing good-quality care.

TOOLS TO IMPROVE QUALITY

Several techniques are used to improve the quality of services, one such technique is known as COPE (Client Oriented Provider Efficient), It is a simple low-cost technique of self-assessment designed to help family planning clinic personnel serve more clients in ways that better satisfy the client's needs.

COPE is cost-effective:COPE is inexpensive to do. All that is needed are a few hours of a facilitator's time, a small amount of time for staff to participate during regular work hours, flipchart paper, and photocopies of the forms needed for the exercises.

COPE is transferable and adaptable from one setting to another:

COPE has been used in a range of health care facilities, from national referral hospitals to small clinics, in private- and public-sector institutions, and in both very-low-resource and very-high-resource settings. COPE also has been applied to many different health services, from family planning to maternal and child health services to infection prevention practices for all staff at a health care facility.

COPE helps site managers work more effectively:

Although site managers may initially find introducing COPE and quality indicators to be time-consuming, once staffs become involved in solving day-to-day problems on their own, managers generally find that they have more time to focus on major problems. In addition, COPE helps site managers solve problems, thus relieving them of some of the burden.

Poor quality is costly:

If something is not done correctly the first time, it must be fixed, often repeatedly. Moreover, the consequences may be serious, in terms of both cost and the health of individuals and the community; COPE helps reduce the cost of poor quality by helping staff identify and solve problems, focusing on processes and systems to prevent problems from occurring in the future.

CONSTRAINTS TO IMPROVING QUALITY OF CARE

A multitude of factors, often appearing in combination, can affect providers' ability to deliver quality reproductive health services. Common factors include changes in the health care system, strengths or deficiencies within systems or individual facilities, availability of supplies and equipment, regulatory constraints, and providers' level of competence.

Difficult Working Conditions:

Conditions within individual clinics or within groups of clinics can be barriers to high-quality care. Many providers believe that their working conditions severely impede their job performance, and complain about poorly equipped facilities, long hours, low pay, and little recognition. Health professionals may not be satisfied with their working conditions due to

heavy workload, lack of equipment and drugs, poor salary, and lack of continuing education. They may not be able to visit all the villages in their work areas, due to a lack of proper transportation and to meager travel allowances.

Inadequate Supplies:

Even when they receive other types of support from the health care system, providers frequently face shortages of basic medical supplies, such as contraceptives, infection control equipment, and gloves etc.

Attitudinal and Regulatory Barriers:

Several barriers may limit providers ability to provide quality care. Knowledge gaps, including both community "myths" and insufficient knowledge and skills among providers, represent one type of barrier. Gender bias and moral constraints can also play a role in limiting care.

There are also medical barriers and practices based on questionable medical rationales that limit clients' access to contraception. For example, providers-imposed restrictions on family planning based on clients' age, marital status, spousal consent, and number of children.

6.4 ASSESSMENT OF QUALITY

6.4 ASSESSMENT OF QUALITY-OF-CARE SERVICES AT THE CENTRE

INTEGRATING SRH IN PRIMARY HEALTH

Integration means to be able to link up services and expertise in the most cost and time effective manner. It is also convenient for the woman to attend one facility and have a multitude of services provided.

WHO strongly recommends integration of RH, Antenatal and FP services along with STI and Neonatal services. Sexual and reproductive health and rights (SRHR) are an essential part of universal health coverage (UHC). Pakistan is moving towards UHC, and we need to assess how the SRHR needs of their population are met throughout the life course, from infancy and childhood through adolescence and into adulthood and old age.

To effectively meet the SRHR needs of people, a comprehensive approach to SRHR is required. Taking a comprehensive approach to SRHR entails adopting the full definition of SRHR and providing an essential package of SRHR interventions with a life course approach, applying equity in access, quality of care, without discrimination, and accountability across implementation.

A comprehensive approach to SRHR is cost-effective and affordable for most countries; however, certain countries will require increased investments to successfully adopt and progressively realize SRHR in UHC.

INTEGRATED PEOPLE-CENTRED HEALTH SERVICES

Integrated people-centred health services mean putting people and communities, not diseases, at the centre of health systems, and empowering people to take charge of their own health rather than being passive recipients of services. Evidence shows that health systems oriented around the needs of people and communities are more effective, cost less, improve health literacy and patient engagement, and are better prepared to respond to health crises.

People-centred health services is an approach to care that consciously adopts the perspectives of individuals, families, and communities, and sees them as participants as well as beneficiaries of trusted health systems that respond to their needs and preferences in humane and holistic ways. People-centred care requires that people have the education and support they need to make decisions and participate in their own care. It is organized around the health needs and expectations of people rather than diseases.

Integrated health services is health services that are managed and delivered in a way that ensures people receive a continuum of health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care services, at the different levels and sites of care within the health system, and according to their needs, throughout their whole life.

Integrated people-centred health services is an important new way to empower patients, fight health system fragmentation and foster greater coordination and collaboration with

organizations and providers across care settings, to deliver health services that are aligned with the needs of people

Principles of Person-Centred Care

The Health Foundation sets out **four** principles of person-centred care, which you should keep in mind whenever you support and care for patients.

THE FOUR PRINCIPLES OF PERSON-CENTRED CARE ARE:

1. Treat people with dignity, compassion, and respect.

Patients often lose their independence when they enter care, which puts their dignity at risk. Person-centred care enables you to maintain that dignity by respecting their wishes and treating them with compassion and empathy.

To fulfil this principle, you must always keep in mind that patients have their own thoughts, feelings, opinions, beliefs, and values, and these don't suddenly become invalidated by their care needs. Respecting their personal qualities helps the patient feel validated and cared for much more wholly: both physically and emotionally.

2. Provide coordinated care, support, and treatment.

To deliver consistent person-centred care, you have to coordinate with other health and social care workers and services. Otherwise, when patients move between services or carers, you have to rebuild an understanding of their personal wants and needs. In the meantime, the patient would not receive the level of care they need.

Record patients' personal needs in their care plan and share it with other caregivers and services where necessary. Furthermore, all carers should communicate with one another to build a shared understanding of how to deliver person-centred care to their patients. Remember to always keep confidentiality in mind.

3. Offer personalised care, support, and treatment.

This principle is the heart of person-centred care. It requires you to understand that what works for one service user may not be suitable for another. A standardised approach can affect their ability to recover or manage their condition properly, and – depending on their personal circumstances and values – may damage their quality of life.

Personalising your service to each patient allows them to retain some of their independence and fulfil their personal wants and needs.

4. Enable service users to recognise and develop their strengths and abilities, so they can live an independent and fulfilling life.

Providing person-centred care requires involving patients in decisions and helping them take actions to support themselves. Doing so helps them to develop their own capabilities and an understanding of how to look after themselves independently.

Fulfilling this principle is mutually beneficial. The patient will feel in greater control of their life and less reliant on healthcare services. In turn, you'll have more time to look after patients with more significant dependencies.

Keep in mind that this is a fine balance. Trying to force patients to do more on their own can make them feel like you don't want to help, while too much involvement makes them feel like they have no say. All it takes to avoid this is maintaining an ongoing dialogue with the patient and their representatives.

ASSESSING QUALITY IN RH

Service Provision Assessment (SPA)

The most comprehensive tool for evaluating quality of care is the from Demographic Health Survey(DHS), a national survey of a representative sample of facilities that provide maternal, child, and reproductive health (RH) service. In addition to quality, it also measures the general functioning of a network of public and private facilities, and it provides an inventory of available equipment and supplies.

The SPA provides a means of assessing strengths and weaknesses in the service delivery environment, which (1) may explain the impact (or lack thereof) of the services on health behaviors in the catchment area, and (2) may guide policy makers and program administrators in prioritizing resources for better health outcomes.

The SPA uses four different data collection methods.

The first is an inventory of resources and support services, which provides information on the "preparedness" of a facility to provide each of the priority services at an accepted standard of quality. As part of the inventory (also known as a facility audit), interviewers ask staff about their qualifications, training, perceptions of the service delivery environment, and related issues.

The second is a provider interview, during which interviewers ask health service providers for information on their qualifications (training, experience, continued education), supervision they have received, and perceptions of the service delivery environment.

The third is observation of services provided. The observation assesses the extent to which service providers adhere to service delivery standards.

The fourth is exit interviews with clients who have received services. The exit interview assesses the client's understanding and perceptions of the consultation/examination, as well as recall of instructions regarding treatment or preventive behaviors. Recall of key messages increases the likelihood that the client will successfully follow treatment or will perform the preventive behaviors that optimize healthy outcomes.

The SPA not only measures quality of care but also overall functioning of the facility, as reflected by the set of questions it addresses:

1) To what extent are the surveyed facilities prepared to provide the priority services?
2) To what extent does the service delivery process follow generally accepted

standards?

3) To what extent do support systems for maintaining or improving the existing services exist, and how well are they functioning?

4) What are the issues the clients and service providers consider relevant to their satisfaction with the service delivery environment?

The SPA provides the following information on five types of health services: FP, sexually transmitted infections (STIs), maternity and newborn care, child health, and HIV/AIDS:

- Preparedness to provide good quality services;
- Adherence to standards for provision of services; and
- Client understanding of the consultation

Other data, specific to these topic areas, are as follows:

- Preparedness to offer both basic and higher-level diagnosis and treatment of suspected STIs;
- Preparedness to diagnose and to treat HIV/AIDS-infected persons, including specific program components related to HIV/AIDS prevention, treatment of opportunistic infections, palliative treatment, and family and client support services
- Preparedness to provide good quality basic and higher level antenatal care;
- Preparedness to provide basic and higher-level delivery services;
- Preparedness to provide good quality immunization services; and
- Preparedness to provide good quality basic diagnosis and outpatient treatment of the seriously ill child

For each of these health services, the SPA covers the following specific components:

(1) **Staff:** What is the qualification of staff who provide the service? Have the service providers received periodic continuing education on relevant topics, and how recently has training occurred? Have the service providers received a minimal level of supervision?

(2) **Process:** Do protocols and standards of practice for each service meet generally accepted quality standards for basic as well as advanced level services at referral facilities? Do providers adhere to the standards of practice for service delivery? The process assessed includes procedures followed, components of physical examinations, as well as the information exchanged between the provider and client (history, symptoms, advice). The SPA assesses if the process during service delivery meets the standards; it does not assess if providers correctly diagnose the problems.

(3) **Facility resources, equipment, and supplies**: What specific equipment and supplies are available for meeting various levels of service delivery? What are the basic systems and infrastructure that may impact utilization and capacity to provide standard level services? Are the elements required to provide the services meeting the minimum standard, present, functioning, and in the appropriate location for use during service

provision? Are there systems for maintaining adequate availability of supplies (inventories; appropriate storage, equipment maintenance and repair/ replacement systems), and is there evidence of their effectiveness?

(4) **Systems for evaluating and monitoring services:** Are routine information systems up-to-date and able to provide basic client and service provision data? Are there systems for monitoring community coverage if community coverage is expected of the facility?

(5) **Facility management:** Does the facility have basic management systems in place, and do they include community representation? Does the facility participate in any financing mechanism that impacts the cost to the community or client?

(6) **Client understanding:** What information regarding the consultation, instructions, or follow up can the client recall?

(7) **Service provision environment:** Does the facility collect very basic information about the problems staff think should be addressed to improve their working situation and services? Does the facility collect data revealing the opinion of clients regarding issues related to satisfaction with their consultation and the service delivery environment?

SECTION SEVEN

ADOLESCENCE

7.1 ADOLESCENE, A TIME OF CHANGES

7.1 ADOLESCENE, A TIME OF CHANGES

In 1994, more than 10,000 participants, including representatives from 179 governments, United Nations agencies, as well as nongovernmental and civil society organizations convened in Cairo (Egypt) for the International Conference on Population and Development (ICPD). The conference adopted a forward-looking Programme of Action (PoA) that continues to serve as a comprehensive guide to development policies and programs that are centered around the improvement of people's health and well-being and the reduction of inequalities

The PoA underscored the centrality of ensuring the sexual and reproductive health and rights (SRHR) of all people in the pathway to sustainable development. The PoA also gave prominence to adolescents' SRHR and served as an imp etus for increased investments and programs aimed at improving their health and well-being.

In the 25 years following the ICPD, there has been increased international commitment to improving the health of adolescents (aged 10–19 years) and their SRHR as evidenced by increased investments in adolescent SRHR programming. It is crucial to focus on six aspects of adolescents' SRHR: pregnancy, HIV, child marriage, violence against women and girls, female genital mutilation, and menstruation.

There is evidence of significant declines in adolescent pregnancy, child marriage and female genital mutilation increased funding for programs and research targeting adolescents; and a significant growth in the number of evidence-informed policies, normative documents, and guidelines on adolescent-responsive SRHR programming. Despite the progress, several critical gaps remain.

First, there remain substantial inequalities across and within countries in key indicators of adolescent health.

Second, some indicators such as Domestic violence has worsened

Third, efforts to implement adolescent SRHR policies and programs are impeded by extensive resistance to the provision of comprehensive SRHR information and services to adolescents because of social norms and taboos around adolescents' sexuality

Fourth, the multiple factors that drive adolescents' SRHR demand complex programs that are often challenging to implement.

Finally, an issue that remains largely silent in these papers is the limited focus on adolescent boys despite the PoA's emphasis that “Special efforts should be made to emphasize men's shared responsibility and promote their active involvement in responsible parenthood, sexual and reproductive behavior, including family planning; prenatal, maternal and child health; prevention of sexually transmitted diseases, including HIV; prevention of unwanted and high-risk pregnancies”

Important five strategic actions that need to be taken to achieve progress: use political, governmental, and social support to strengthen adolescent SRHR programs; use available resources effectively and demonstrate impact; ensure that enabling laws and policies are

widely communicated and applied; use available data and evidence to inform policies and programs; and manage implementation at scale with quality and equity.

Some of the commitments nations have made in international agreements, notably in the ICPD Programme of Action (1994) and the resolution of the UN Committee on Population & Development (2012), to young people include: realisation of the right to education and attainment of a secondary school education; delaying marriage beyond childhood and ensuring free and full choice in marriage-related decisions; exercise of the right to health, including access to friendly health services and counselling; access to health-promoting information, including on sexual and reproductive matters; acquisition of protective assets and agency, particularly among girls and young women, and promotion of gender equitable roles and attitudes; protection from gender-based violence; and socialisation in a supportive environment These are crucial for a successful transition to adulthood with reference to sexual and reproductive health outcomes.

SITUATION ANALYSIS:

Reproductive health (RH) issues of both women and men in Pakistan based on selected indicators in the sociocultural context of the country. Many independent studies, show that reproductive health problems of women are mainly related to pregnancy and childbirth complications that arise because of their own neglect in seeking appropriate and timely health care. Social and economic constraints in accessing services and inadequacies in the health care system for handling obstetric emergencies are the major causes of high maternal mortality rate, especially among rural women.

Men's knowledge and attitudes regarding RH pertain mostly to family planning with little information on issues related to Sexually Transmitted Diseases (STDs), male potency, and sexuality. This results in many misconceptions about RH and use of unsafe and traditional means of health care. The analysis suggests that effective educational, communication, and support programmes are needed to raise the level of awareness and to access appropriate RH services for both the genders.

Introduction to Adolescent and Youth Reproductive Health (AYRH)

More than a quarter of the world’s population is between the ages of 10 and 24, with 86% living in less developed countries. These young people are tomorrow’s parents. The reproductive and sexual health decisions they make today will affect the health and wellbeing of their communities and of their countries for decades to come.

Two issues have a profound impact on young people’s sexual health and reproductive lives: family planning and HIV/AIDS. Teenage girls are more likely to die from pregnancy-related health complications than older women in their 20s. Statistics indicate that one-half of all new HIV infections worldwide occur among young people aged 15 to 24.

Why it is important to provide services for adolescents and young people?

The World Health Organization (WHO) defines an adolescent as an individual in the 10-19 years age group and usually uses the term young person to denote those between 10 and 24 years. In this Module we will use these definitions and the terms early adolescence (10-

14), late adolescence (15-19) and post-adolescence (20-24), because they clarify the problems and designing appropriate interventions for young people of different ages. You will explore the relevance of this classification in greater detail in Study Sessions 10 and 12 which discuss how you can promote and provide adolescent and youth-friendly reproductive services.

Adolescence is a period of transition from childhood to adulthood during which adolescents develop biologically and psychologically and move towards independence. Although we may think of adolescents as a healthy group, many die prematurely and unnecessarily through accidents, suicide, violence and pregnancy-related complications. Some of the serious conditions of adulthood (for example, sexually transmitted infections (STIs), like HIV; and tobacco use) have their roots in adolescent behaviour.

Studies show that young people are not affected equally by reproductive health problems. Orphans, young girls in rural areas, young people who are physically or mentally impaired, abused or have been abused as children and those migrating to urban areas or being trafficked are more likely to have problems.

Despite their numbers, adolescents have not traditionally been considered a health priority in many countries, including Ethiopia. While the country has been implementing major interventions to reduce child mortality and morbidity, interventions addressing the health needs of young people have been limited. Young people often have less access to information, services and resources than those who are older. Health services are rarely designed specifically to meet their needs and health workers only occasionally receive specialist training in issues pertinent to adolescent sexual health. It is perhaps not surprising therefore that there are particularly low levels of health-seeking behaviour among young people. Similarly, young people in a variety of contexts have reported that access to contraception and condoms is difficult.

The negative health consequences of adolescents can pass from one generation to the next. For example, babies born to adolescent mothers have a high risk of being underweight or stillborn. They are also likely to suffer from the same social and economic disadvantages encountered by their mothers. That is why addressing the needs of adolescents is an intergenerational investment with huge benefits to subsequent generations

Young people are the future of societies, and their needs should be addressed to have healthy and productive citizens.

If the nation is to address its rapid population growth, it is crucial to acknowledge the importance of the reproductive health concerns of adolescents and young people, particularly in their decisions related to avoidance of unwanted pregnancy.

Strategies for promoting the reproductive health of young people

The Government of Ethiopia has adopted policies and strategies to address some of the social, economic, educational and health problems faced by young people. Currently, national programmes are guided by a 10-year plan which is based on the 'National Adolescent and Youth Reproductive Health Strategy 2006-2015'. Other key documents indicating government commitment include the Young People Policy issued in 2000, the Policy on HIV/AIDS launched in 1998, the Revised Family Laws amended in 2000 to protect young women's rights, (for example against forced marriages), and the Revised Penal Code, which penalises sexual violence and many harmful traditional practices.

When developing and implementing interventions you need to consider that while many adolescents and young people share common characteristics, their needs vary by age, sex, educational status, marital status, migration status and residence. When developing and implementing interventions you need to appreciate that you will have to work in different ways with different age groups.

An activity that is suitable for those in early adolescence (10-14 years old) may not be suitable for those in post-adolescence (20-24 years old). For instance, those in their early adolescence are more likely to be in primary schools, not yet married and hence less likely to have started sexual relationships, all of which determine the type of information and services that would be appropriate for them.

You need to give special attention to these vulnerable young adolescents (aged 10-14) and those at risk of irreversible harm to their reproductive health and rights (e.g. through forced sex, early marriage, poverty-driven exchanges of sex for gifts or money, and violence). As has already been mentioned, some groups are more vulnerable than others and it is to vulnerable individuals that you need to offer most help. In this Module you will gain an understanding of who these vulnerable individuals are and insight into their difficulties, and you will learn how you can help them.

You may have already recognised that men and women are not treated equally in your community. In general, girls and women are treated as inferior and they are given fewer privileges and less access to resources. The roles they have within your community are different to the roles given to men. Gender refers to the socially and culturally defined roles for males and females. These roles are learned over time, can change from time to time, and vary widely within and between cultures. In Study Session 6 there will be a discussion of the way that women are treated unfairly because of the way they are viewed within many communities. This gender inequality means that girls and women need your help to safeguard their sexual and reproductive health to a greater extent than do young boys and men.

In this Module you will also learn how you can help provide a group of services for young

people, such as counselling, family planning, voluntary counselling, and testing for sexually transmitted infections (STIs) including HIV, maternal and child health, and post-abortion care. You will learn how to involve other members of your community and how to find ways of working with them and you will recognise when you need to refer individuals for help at the next level of health facility.

Protecting adolescent sexual and reproductive health

Adolescent sexual and reproductive health refers to the physical and emotional wellbeing of adolescents and includes their ability to remain free from unwanted pregnancy, unsafe abortion, STIs (including HIV/AIDS), and all forms of sexual violence and coercion. Dual protection is the consistent use of a male or female condom in combination with a second contraceptive method, such as oral contraceptive pills. Often young people come to a healthcare facility for contraception and are given a method that protects them only from pregnancy.

As a healthcare provider, you should ensure that all young people are using a method or combination of methods that protect them from both pregnancy and STIs/HIV to minimise their risk to the lowest level possible. Following are the important components of adolescent and youth reproductive health programmes that should be available to all young people.

Services that should be provided for young people

- Information and counselling on sexual and reproductive health issues
- Promotion of healthy sexual behaviours
- Family planning information, counselling, and methods of contraception (including emergency contraceptive methods)
- Condom promotion and provision
- Testing and counselling services for pregnancy, HIV and other STIs
- Management of STIs
- Antenatal care (ANC), delivery services, postnatal care (PNC) and pregnant mother-to-child transmission (PMTCT)
- Abortion and post-abortion care
- Appropriate referral linkage between health facilities at different levels.

Biological and psychosocial changes during adolescence

For young people, adolescence is all about change: in the way they think, in their bodies and in how they relate to others. As a Health Practitioner, it is important for you to know these changes in order to understand the special needs of young people and provide appropriate services.

Changes in thinking and reasoning (cognition)

Children tend to be concrete thinkers, mostly relying on literal, straightforward interpretation of ideas. In adolescence they become abstract thinkers, as they begin to be able to think

abstractly and to conceptualise abstract ideas such as love, justice, fairness, truth, and spirituality.

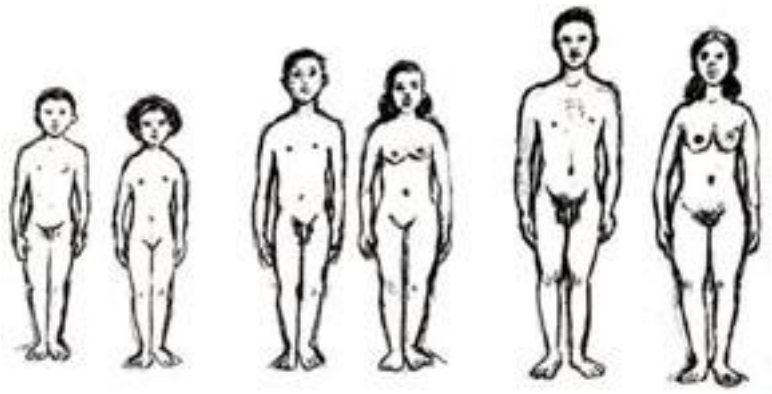
They start to analyse situations logically in terms of cause and effect, think about their futures, evaluate alternatives, set personal goals, and make mature decisions.

As their abilities to think and reason increase, adolescents will become increasingly independent, and take on increased responsibilities. They will also often challenge the ideas of the adults in their community, and this can lead to friction.

Son disobeying his father's commands.

Physical changes

Puberty is the time in which sexual and physical characteristics mature. The exact age a child enters puberty depends on a number of different things, such as genes, nutrition and sex. Most girls and boys enter puberty between 10-16 years of age although some start earlier or later. Girls tend to enter puberty two years before boys.



Young people at different age groups (showing physical changes) at ages 10-14, 15-19 and 20-24 from the left to the right.

Following are the details of the main physical changes that occur during puberty in males and females. It is the changing hormonal activity within their bodies that brings about these changes.

PHYSICAL CHANGES DURING ADOLESCENCE

Physical changes observed in females*:*

- Skin becomes oily, sometimes with pimples and acne
- Hair grows under arms, pubic area, legs
- Breasts grow
- Hips broaden, weight and height increase, hands, feet, arms, and legs become larger
- Perspiration increases and body odour may appear
- Voice deepens
- Menstruation begins more wetness in the vaginal area.

Physical changes observed in males:

- Skin becomes oily, sometimes with pimples and acne
- Hair grows under arms, pubic areas, legs, chest, face
- Muscles especially in legs and arms get bigger and stronger
- Shoulders and chest broaden, weight and height increase, hands, feet, arms and legs become larger
- Perspiration increases and body odour may appear
- Voice cracks and then deepens
- Penis and testicles grow and begin to hang down
- Wet dreams and erection occur frequently
- Ejaculation occurs during sexual climax.

Social and emotional changes

As adolescents grow physically, they also think and feel differently. Box 1.3 details the main social and emotional changes that take place. Some of these changes in the way they think are a consequence of growing older and learning more about the world and the way other people think and behave. But changes in the way they feel are more likely to be a consequence of the hormonal changes in their bodies. These changed feelings can often be a source of confusion and unhappiness. In this Module you will learn how you can help young people to prepare for these changes and to understand them.

Social and emotional changes during puberty

- Starting to think independently/make decisions for themselves
- Starting to have sexual feelings
- Experimentation and curiosity (sexual intercourse, alcohol, drugs, and other stimulants)
- Friends may matter more than they used to (what they wear, do, how they speak and

use language – e.g., slang and informal speech)

- Mood changes
- Need for privacy
- Concern about body image, need to be seen as attractive and able to sexually attract people
- Need to break social sanctions and laws
- Disrespect for authority including parental supervision
- Argumentative and aggressive behaviours become evident and often disturb parents and teachers
- Delinquency/law-breaking activities
- Political extremism

Dietary issues

Skipping meals is another phenomenon seen in this age group which leads to under-nutrition and poor development. Health care personnel should discourage this practice. Apart from nutritional deficiencies, the adolescent period is critical for prevention of certain adult diseases like obesity, atherosclerosis, hypertension, coronary heart disease, etc. Early dietary modification may help reduce associated morbidity and mortality.

7.2 PUBERTY

7.2 PUBERTY

The reproductive systems of males and females begin to develop soon after conception. A gene on the male's Y chromosome called *SRY* is critical in stimulating a cascade of events that simultaneously stimulate testis development and repress the development of female structures. Testosterone produced by Leydig cells in the embryonic testis stimulates the development of male sexual organs. If testosterone is not present, female sexual organs develop.

Whereas the gonads and some other reproductive tissues are considered bipotential, the tissue that forms the internal reproductive structures stems from ducts that will develop into only male (Wolffian) or female (Müllerian) structures. To be able to reproduce as an adult, one of these systems must develop properly and the other must degrade.

Further development of the reproductive systems occurs at puberty. The initiation of the changes that occur in puberty is the result of a decrease in sensitivity to negative feedback in the hypothalamus and pituitary gland, and an increase in sensitivity of the gonads to FSH and LH stimulation. These changes lead to increases in either estrogen or testosterone, in female and male adolescents, respectively. The increase in sex steroid hormones leads to maturation of the gonads and other reproductive organs. The initiation of spermatogenesis begins in boys, and girls begin ovulating and menstruating. Increases in sex steroid hormones also lead to the development of secondary sex characteristics such as breast development in girls and facial hair and larynx growth in boys

The orderly progression of puberty begins with breast budding (thelarche), accelerated growth, and menses (menarche). Adrenarche, sexual hair growth, is independent from GnRH function and typically occurs between breast budding and accelerated growth but may occur anywhere along the puberty timeline, The average age of girls at menarche is 12.6 years, with a range of 9-15 years. Progression of puberty requires exposure to estrogens.

Puberty is the stage of development at which individuals become sexually mature. Though the outcomes of puberty for boys and girls are very different, the hormonal control of the process is very similar. In addition, though the timing of these events varies between individuals, the sequence of changes that occur is predictable for male and female adolescents. As shown below i.e concerted release of hormones from the hypothalamus (GnRH), the anterior pituitary (LH and FSH), and the gonads (either testosterone or estrogen) is responsible for the maturation of the reproductive systems and the development of secondary sex characteristics, which are physical changes that serve auxiliary roles in reproduction.

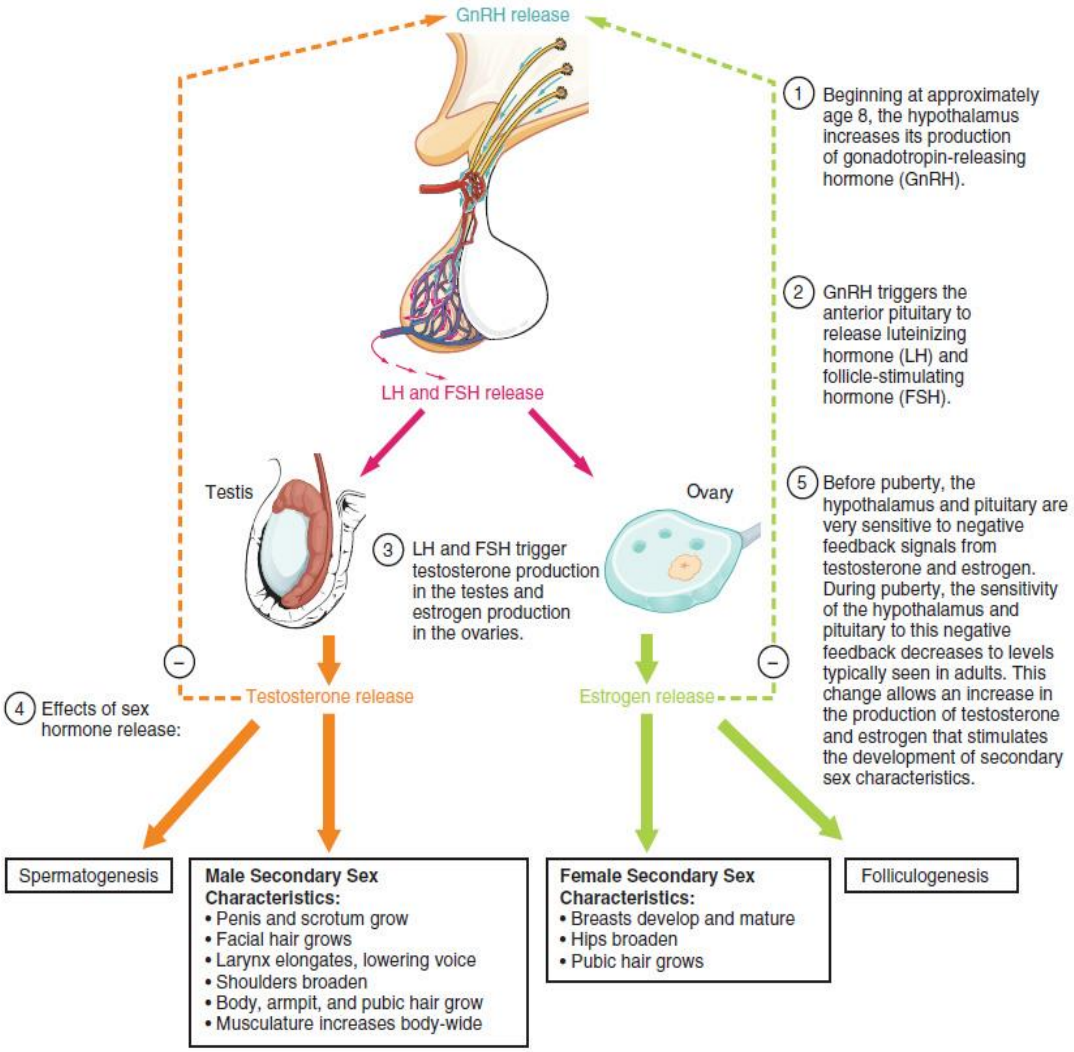
The first changes begin around the age of eight or nine when the production of LH becomes detectable. The release of LH occurs primarily at night during sleep and precedes the physical changes of puberty by several years. In pre-pubertal children, the sensitivity of the negative feedback system in the hypothalamus and pituitary is very high. This means that very low concentrations of androgens or estrogens will negatively feed back onto the hypothalamus and pituitary, keeping the production of GnRH, LH, and FSH low. As an individual approaches puberty, two changes in sensitivity occur.

The first is a decrease of sensitivity in the hypothalamus and pituitary to negative feedback,

meaning that it takes increasingly larger concentrations of sex steroid hormones to stop the production of LH and FSH. The second change in sensitivity is an increase in sensitivity of the gonads to the FSH and LH signals, meaning the gonads of adults are more responsive to gonadotropins than are the gonads of children. As a result of these two changes, the levels of LH and FSH slowly increase and lead to the enlargement and maturation of the gonads, which in turn leads to secretion of higher levels of sex hormones and the initiation of spermatogenesis and folliculogenesis.

FACTORS AFFECTING PUBERTY:

In addition to age, multiple factors can affect the age of onset of puberty, including genetics, environment, and psychological stress. One of the more important influences may be nutrition; Some studies indicate a link between puberty onset and the amount of stored fat in an individual. This effect is more pronounced in girls but has been documented in both sexes. Body fat, corresponding with secretion of the hormone leptin by adipose cells, appears to have a strong role in determining menarche. This may reflect to some extent the high metabolic costs of gestation and lactation. In girls who are lean and highly active, such as gymnasts, there is often a delay in the onset of puberty.



During puberty, the release of LH and FSH from the anterior pituitary stimulates the gonads to produce sex hormones in both male and female adolescents.

SIGNS OF PUBERTY

Different sex steroid hormone concentrations between the sexes also contribute to the development and function of secondary sexual characteristics. Examples of secondary sexual characteristics are listed in the table below

Development of the Secondary Sexual Characteristics (Table 1)	
Male	**Female**
Increased larynx size and deepening of the voice	Deposition of fat, predominantly in breasts and hips
Increased muscular development	Breast development
Growth of facial, axillary, and pubic hair, and increased growth of body hair	Broadening of the pelvis and growth of axillary and pubic hair

As a girl reaches puberty, typically the first change that is visible is the development of the breast tissue. This is followed by the growth of axillary and pubic hair. A growth spurt normally starts at approximately age 9 to 11 and may last two years or more. During this time, a girl's height can increase 3 inches a year. The next step in puberty is menarche, the start of menstruation.

In boys, the growth of the testes is typically the first physical sign of the beginning of puberty, which is followed by growth and pigmentation of the scrotum and growth of the penis. The next step is the growth of hair, including armpit, pubic, chest, and facial hair. Testosterone stimulates the growth of the larynx and thickening and lengthening of the vocal folds, which causes the voice to drop in pitch. The first fertile ejaculations typically appear at approximately 15 years of age, but this age can vary widely across individual boys. Unlike the early growth spurt observed in females, the male growth spurt occurs toward the end of puberty, at approximately age 11 to 13, and a boy's height can increase as much as 4 inches a year. In some males, pubertal development can continue through the early 20s.

Biological Maturation:

While the body is maturing on the outside, the internal reproductive organs are also changing. In boys, the testes begin to produce sperms. In girls, the ovaries begin to release eggs, and they begin to menstruate. This usually happens between the age of 12 and 15, although it can happen earlier or later.

Physical Changes:

During adolescence, both boys and girls generally grow quickly. The marked changes in the body during puberty are height and weight. Their genital organs also increase in size. Other changes take place as well, such as the growth of hair in the genital area and on the face (for boys)

- Rapid growth increase starts in boys around 12 to 14 years of age.
- There is an increase in height and weight.

- Muscles develop and shoulders broaden.
- Voice gets deeper.
- Breasts may change shape and get bigger. This will settle down, as they get older.
- Hair grows around genitals, legs, underarms, body, and face between 13 to16 years.
- Testicles and penis grow bigger.
- The testicles start producing sperms about a year after the penis and testicles start to enlarge.
- Wet dreams may occur. A wet dream is an ejaculation, which takes place when a male youth is asleep. This is caused by a large amount of semen passing from the testicles through the urethra. This is nature's way of letting out excess semen and sperms.

In Girls:

- Rapid growth increase starts in girls at the age of 11 to 12 years
- There is an increase in height and weight
- Breasts begin to grow larger
- Hair grows around genitals and underarms between 9 to 16 years
- Skin gets oily and some people get pimples (acne)
- Hips become larger
- Genitals (vagina & lips of vagina) grow bigger and may change shape slightly
- In some girls, voice changes
- Menstruation begins from 9 to 17 years of age.

THE FEMALE BODY CLOCK

Puberty:

Begins between ages of 8 to 12 and ends around age 16 or 18 years

- It takes approximately 3-5 years to complete this stage of growth.
- Onset of puberty is consistently 2 years earlier in girls than in boys. Girls reach full height about 2 years earlier than boys.
- Earlier sexual maturation of females is one reason, why males are about 10 percent taller as adults by virtue of maturing later, males have more time to continue growing.

SEQUENCE OF CHANGES

Breast Budding (First Change)

- This starts between age of 8 and 13 (average age of 11)
- This development is completed between age of 13 and 18 (average 15)
- This holds a psychological importance to young female who may worry about its size

and shape

- It is not unusual for one breast to develop faster than the other
- An adolescent girl may worry about the asymmetry especially if she does not know that the difference is usually corrected by the time development is completed
- A certain amount of preoccupation and self-consciousness is quite common.

Growth of Bony Pelvis (Second Change)

- Girls at birth already have a wider pelvic outlet so that the natural adaptation for childbearing is present from a very early age
- This change primarily involves widening of the pelvic inlet and broadening of the much more noticeable hips

Growth Spurt (Third Change)

- This usually starts at about age 10 ½ (may begin as early as 9.5 years) and peaks at age 12
- Growth spurt usually ends at around age 14
- Any further noticeable growth in stature stops at age 18
- At the end of the growth spurt, the average girl of 14 has already reached 98 percent of her adult height
- The first menstrual period invariably occurs after peak height velocity is passed (usually 1 year), so that a girl can be reassured about future growth if her periods have begun.

Pubic Hair (Fourth Change)

- Pubic hair begins to grow between the ages of 11 and 12 on the average
- The growth is completed by age 14
- Kinky Pubic hair appears after the period of maximum growth in height
- This development is a sign that first menstruation is approximately 6 months to 1 year away
- Axillary hair appears on the average some 2 years after the beginning of pubic hair growth.

First Menstrual Period or Menarche (Fifth Change)

- One lingering misconception -- many people think menstruation marks the beginning of puberty when actually it is one of the later events to characterize this stage of life
- Generally, age range for menarche may vary from 9 - 18 years. This usually begins 2 years after the start of breast development (after peak of growth spurt in height)
- First menstrual cycles may be more irregular than later ones
- There may be a lag in time of 1 year to 18 months before ovulation becomes well

established (however, this cannot be relied upon in the individual case).

Underarm Hair and Coarser Body Hair (Sixth Change)

While this development is expected, the ultimate amount of body hair an individual develops seems to depend largely on heredity.

Oil and Sweat Producing Glands Activate (Seventh Change)

The activation of sebaceous and sweat glands cause the following:

- Appearance of acne.
- Body Odour.

Completion of the Growth of Uterus and Vagina (Eighth Change)

- Although this start developing early, their growth is the last to be completed
- The muscular wall of the uterus becomes larger and elaborate
- This is designed to accommodate foetus during pregnancy as well as to expel it during childbirth
- Cyclical changes occur in its lining (endometrium)
- The vagina becomes larger, and its lining grows thicker
- Vaginal contents, which are alkaline at the beginning of puberty, become acidic at this stage.
- At birth, the ovaries are a complete organ. Each contains about half a million immature ova - each one can become a mature egg. The female is born with all the eggs, which she is going to usually develop 400 eggs. These follicles remain immature until puberty when ovulation begins. At puberty, the follicles start maturing into eggs in monthly cycles

Stage	Clinical and psychological characteristics
Premenarchial (9-11 years)	Onset
	Breast enlargement (bud stage) **
	Straight Pubic hair Ovarian enlargement
	Height spurt begins about 1 year later
Menarchial (10-13 Years)	Kinky pubic hair Height spurt at apex Mammary areola shows pigmentation about 1 year later
	Menarche (an ovulatory cycles)
	1 or more years later Full re-productivity (follicular maturation, ovulation, development of corpus luteum)
	Axillary hair Sweat and sebaceous glands enlarge

Postmensarchial (12-15 years)	Mucin leucorrhea as a function of cervical crypts

Interval from first sign of puberty to complete maturity is 1.5-6 years

Bud stage of breast development occurs at 0.5-2 years from breast development to menarche is 2-3 years

MALE PUBERTY

Puberty is characterized by an increase in growth rate and development of secondary sexual characteristics. The changes in body constitution during puberty are reflected most impressively by increase in height and weight.

THE MALE BODY CLOCK

Puberty:

Begins between the ages of 10 or 11 years

- Sequence of puberty maturation is predictable
- The rate at which the events occur is highly variable

Onset of puberty is consistently 2 years later in boys than in girls

SEQUENCE OF CHANGES

Growth of Testes and Scrotum (First Change)

- Growth of testes and scrotum usually begins between the ages of 10 and 13.5years
- Development remains in progress through most of puberty and is completed sometime between the ages of 14.5 to 18 years

Growth of Pubic Hair (Second Change)

- Straight pubic hair appears before the first ejaculation, but pubic hair becomes kinky after the milestone is reached
- Pubic hair becomes darker, coarser and curlier, as it spreads over the scrotum and higher up the abdomen

Penis Size Spurt & First Ejaculation (Third Change)

- The start of penis growth spurt occurs normally between the ages of 10.5 and 14.5 years (average age 12.5)
- Age for completion of this growth spurt ranges from 12.5 to 16.5 years (average age 14.5)
- A late developer may begin to wonder whether he will ever develop his body properly or be as well-endowed sexually as others

Height Spurt (Fourth Change)

- Height spurt occurs relatively later in boys than in girls between ages of 11 and 13 years.
- Average age for increase in height is 14 years
- A short adolescent male whose genitalia are beginning to develop can be reassured that acceleration in height is soon to take place
- In the years in which a boy grows the fastest, he normally adds from about 3 to 5 inches to his height
- The legs as a rule reach peak growth first
- The spurt in trunk length follows almost a year later

Growth of Larynx (Adam's apple), Voice Changes (Fifth Change)

- Larynx grows larger and it sticks out at the front of the throat, it looks like a small, rounded apple and it's called the Adam's apple
- Vocal cords are thin muscles that stretch across the larynx like rubber bands, at puberty the vocal cords lengthen and thicken
- Deepening of the voice results from enlargement of the larynx and thickening of vocal cords
- This occurs relatively later in adolescence and often is a gradual process
- Voice changes undergo two stages
- Some early voice changes occur prior to the first ejaculation
- Transition into a deep tonal voice comes after the appearance of axillary hair and the period of maximum growth

Coarser Body Hair (Sixth Change)

- Axillary hair appears in the armpits (axilla)
- The body hair becomes coarser

Skin Changes, Sweat and Smell (Seventh Change)

These changes occur due to increased production of androgen hormones at puberty in both sexes.

- Adolescents sweat a lot due to growth of sweat glands and their increased working.
- Body odor develops - adolescence become smelly because of excessive sweat that meets the bacteria on the skin.
- There is increase in skin thickness.
- Sebaceous glands grow more rapidly than their ducts this leads to clogged pores on the surface of the skin, as a result inflammation and infection occurs with the appearance of acne which include:

- Black Heads
- White Heads
- Pimples (Red Bumps)
- Cysts (Bumps filled with Pus)

Facial Hair -Beard& Moustache (Eighth Change)

- This is an important event because of its social implications as a symbol of manhood.
- Facial hair begins to grow at about the time, the axillary hair appears.
- There is a definite order in which the moustache and beard appear.
- The facial hair starts to grow at the corners of the upper lip.
- Its spreads to form a moustache over the corners of the upper lip.
- This is followed by the appearance of hair on the upper part of the cheeks and the area under the lower lip.
- It eventually spreads to the sides and lower border of the chin and the

ADOLESCENT DEVELOPMENT

Overview :

During adolescence, young people experience many changes as they transition from childhood into young adulthood. These changes include physical, behavioral, cognitive, and emotional-social development. Public health professionals who work with adolescents need substantive information about the trajectory of young people's lives during all phases of adolescent development. Researchers suggest adolescence undergo three primary developmental stages of adolescence and young adulthood --early adolescence, middle adolescence, and late adolescence/young adulthood.

Stages of Adolescent Development

Early Adolescence (Ages 10-14)

Early Adolescence occurs between ages 10-14. During this developmental period, adolescents experience the beginning stages of puberty. Both sexes experience significant physical growth and increased sexual interest. Cognitively, adolescents in this stage have a limited capacity for abstract thought but intellectual interests expand and become more important. Although adolescents in this stage have limited interest in the future, they develop deeper moral thinking during the early adolescence stage.

Middle Adolescence (Ages 15-17)

During the middle adolescence stage, puberty is completed for males and females. Physical growth slows for females but continues for males. Adolescents in this stage continue to experience a growing capacity for abstract thought. During this stage, adolescents begin to set long-term goals and become interested in the meaning of life and moral reasoning. Adolescents in this stage of development experience numerous social and emotional

changes including increased self-involvement and an increased drive for independece.

Late Adolescence/Young Adulthood (Ages 18-24)

Adolescents in the late adolescence/young adulthood phase typically experience fewer physical developments and more cognitive developments. Adolescents gain the ability to think about ideas rationally, delay gratification, plan and gain a firm sense of identity. During this last phase of adolescent development, young people also experience increased emotional stability and independence.

7.3 REPRODUCTIVE HEALTH PROBLEMS OF ADOLESCENCE REQUIRING REFFERAL

7.3 REPRODUCTIVE HEALTH PROBLEMS OF ADOLESCENTS

Patterns of Menstrual Dysfunction in Adolescence:

Is still a subject of taboo and superstition. A belief commonly carried is that menstruating women are “unclean” which is enough to instill in them feeling of shame, embarrassment, and resentment. Women also believe that during menstruation they are vulnerable to all manners of ills and dire results will follow bathing or even washing their hair at this time. The health care professional should correct such misconceptions. The menstrual function should be explained to girls truthfully and simply, and they should be made to realize that it is not a means for excreting something obnoxious but is rather a manifestation of motherhood. There is no need for them to stop playing games or not undertaking anything to which they are accustomed. Indeed, they should be encouraged to continue their normal activities.

Common menstrual problems

Some of the more common menstrual problems include:

- **Premenstrual syndrome (PMS)** – hormonal events before a period can trigger a range of side effects in women at risk, including fluid retention, headaches, fatigue and irritability. Treatment options include exercise and dietary changes
- **Dysmenorrhoea** – or painful periods. It is thought that the uterus is prompted by certain hormones to squeeze harder than necessary to dislodge its lining. Treatment options include pain-relieving medication and the oral contraceptive pill
- **Heavy menstrual bleeding** (also known as menorrhagia) – if left untreated, this can cause anaemia. Treatment options include oral contraceptives, iron tablets and Ponstan Forte
- **Amenorrhoea** – or absence of menstrual periods. This is considered abnormal, except during pre-puberty, pregnancy, lactation and postmenopause. Possible causes include low or high body weight and excessive exercise

Dysfunctional Uterine Bleeding (DUB):

Is defined as excessive, prolonged, or un-patterned bleeding from the uterine endometrium

that is unrelated to anatomic lesion of the uterus, ovary, vulva or vagina. It is the most urgent gynaecological problem of adolescent period and often presents as an acute medical and emotional emergency. Twenty percent of all DUB occur in adolescence. The incidence of adolescent DUB is often under-estimated because of the fact that most of these patients are not hospitalized. Menstrual aberrations of DUB are given below. An ovulation or disruption of ovarian function accounts for 75 percent cases of DUB.

MENSTRUAL ABERRATION IN DYSFUNCTIONAL UTERINE BLEEDING (DUB)	
POLYMENORRHOEA	Frequent irregular bleeding of less than 18 days interval
OLIGOMENORRHOEA	Infrequent irregular bleeding at intervals of more than 45 days.
METRORRHAGIA	Inter menstrual bleeding between regular periods
MENORRHAGIA	Excessive Uterine bleeding occurring regularly
MENO METRORRHAGIA	Frequent, irregular, excessive & prolonged uterine bleeding

Dysmenorrhoea:

Painful menstrual cramps are experienced by nearly two thirds of post-menarcheal teenagers. Approximately more than 10 percent of them suffer badly enough to miss schools. Dysmenorrhoea can be primary or secondary, the former being more common in adolescence. Secondary dysmenorrhoea results from an underlying structural abnormality of the cervix or uterus, from a foreign body or from endometritis. The cause of dysmenorrhoea has recently been found to be the excessive production of prostaglandins by the endometrium, which stimulates the myometrium to contract producing pain. Prostaglandin synthetase inhibitors such as mefenamic acid (250-500 mg QID) or ibuprofen 600 mg to 1200 mg daily are effective in alleviating the pain in dysmenorrhoeic females.

Acne or Zits:

Acne is a skin condition that shows up as different types of bumps. They include whiteheads, blackheads, red bumps (pimples), and bumps that are filled with pus (cysts). Almost all teens have some acne; about 8 in 10 pre-teens and teens have acne, along with many adults.

Acne is so common that it's considered a normal part of growing from a kid to an adult. However, learning about acne and taking some simple steps can help boys feel better about their face. The skin contains hair follicles, or pores which contain sebaceous glands (also called oil glands) that make sebum, oil that moistens the hair skin. Most of the time the glands make the right amount of sebum, and the pores are fine. But sometimes a pore gets clogged up with too much sebum, dead skin cells, and germs called bacteria. And this can cause acne. If a pore gets clogged up, closes, and bulges out from the skin, that's a whitehead. If a pore clogs up but stays open, the top surface can get dark, and skin is left with a blackhead. Sometimes the walls of the pore are broken, allowing sebum, bacteria, and dead skin cells to get under the skin. This causes a small, red infection called a pimple; picking at pimples may lead to scars on the face. Clogged- up pores that open up deep in the skin can lead to bigger infections known as cysts.

A lot of young and teens get a type of acne called acne vulgaris. It usually appears on the

face, neck, shoulders, upper back, and chest. Teenagers get acne because of the hormonal changes that come with puberty. As boys grow up and their body begins to develop, the hormones stimulate the sebaceous glands to make more sebum, and the glands can become overactive. Where there is too much sebum, the oil clogs the pores and leads to acne. Acne is not caused by eating greasy foods like French fries or pizza, munching on chocolate, or drinking soda; Stress may worsen the acne, because when stressed, the skin pores may make more sebum. Luckily, for most people, acne gets better by the time they are in their twenties.

Prevention of Acne:

If some adolescents are worried about acne, following steps prevent pimples:

- Wash face twice a day with warm water and a mild soap or cleanser to clean away the oil on skin.
- Wash face gently using hands instead of a washcloth. Ask not to scrub the face. Scrubbing irritates the skin and makes one worse.
- Use makeup, moisturizer, or sunscreens which are ‘oil-free,’ ‘non-comedogenic,’ or ‘non- acnegenic’.
- When washing the face, take time to remove all the makeup.
- If hair sprays or gels are used, try to keep them away from face because they can clog pores.
- If one has long hair, keep it away from face and wash it regularly to reduce oil.
- Caps and other hats can cause pimples along the hairline. Therefore, these should be avoided if they are worsening acne.
- Wash face after exercising and sweating a lot.
- Try not to touch the face.
- Don’t pick, squeeze, or pop pimples.

Many lotions and creams are sold at drugstores to help to prevent acne and clean it up. One can try different ones to see which helps. Products with benzyl peroxide or salicylic acid in them are usually pretty helpful for treating acne. Benzoyl peroxide kills the bacteria that can lead to acne and it also can reduce swelling (puffiness) of pimples. Salicylic acid is another acne- fighting ingredient. It causes skin to dry out and peel, which can help to get rid of pimples, too. However, when boys use a product for acne, they should be advised to follow the directions exactly; using more than what is supposed to, can make their skin very red and very dry. Acne medicine can take weeks or months to work.

Primary Amenorrhoea / Delayed Puberty:

Primary amenorrhoeas, or delayed puberty, which is now a preferred term, is a problem of adolescence. Common causes are genetic disorders, polycystic ovarian syndrome, utero-vaginal dysgenesis, late maturity, partial pituitary failure or vaginal agenesis and hymenal atresia. Chromosomal disorders are found in a big group of amenorrhoeic women. These girls require detailed work up as well as reassurance, which the parents would also need.

Management depends on the cause of amenorrhoea. Referral in this case is essential.

Secondary Amenorrhoea:

Secondary amenorrhoea occurs when menstrual periods stop during adolescence after a normal menarche and can be a source of anxiety to both the parents and the girl herself. The causes in most cases are premature ovarian failure and hypothalamic-pituitary dysfunction due to eating disorders, or due to extensive involvement in sports. It may also be due to periodic stress in the school or home environment. The amenorrhoea is potentially temporary but may require sequential estrogen therapy; therefore, referral is required.

Polycystic Ovarian Syndrome:

Clinical and endocrine features of the syndrome include chronic anovulation of peripubertal onset, obesity, hirsutism, ovarian hyperandrogenisms and preferential hypersecretion of LH, together with the presence of bilateral cystic ovaries. The primary defect is attributed to the hypothalamus, adrenal glands or the ovary. The age during which the syndrome occurs ranges between 12 and 20 years; 57.6 percent girls mature early and acne and hirsutism are found in 55 percent of these girls. Reversed LH / FSH ratio are two common endocrinological features. Lifestyle changes are crucial in managing these cases.

Hirsutism:

Hirsutism in adolescent girls is characterized by excessive growth of hormone-dependent hair (pubic, axillary, abdominal, chest and facial hair). A girl with hirsutism may present when her hair growth is regarded as excessive or coarser, longer or more pigmented than that of others in her societal, geographical or racial environment. Ask about use of drugs and family history of hirsutism. Drugs that cause hirsutism are oral contraceptives, phenytoin, steroids and minoxidil. Familial hirsutism without menstrual irregularities does not need intensive investigations. If hirsutism is associated with oligomenorrhoea or amenorrhea, polycystic disorder or chromosomal disorder (Turners syndrome) may be considered as a possible diagnosis. Hirsutism secondary to virilization, or Cushing's syndrome, needs to be kept in mind and investigated. For further investigation referral to a specialist is recommended.

Vaginal Discharge:

Physiological vaginal discharge, also called leucorrhoea, occurs twice in life: initially in the newborn period and then at puberty some time prior to the menarche. Rising estrogen levels stimulate the vagina, the vaginal epithelium thickens and desquamation causes discharge. Additional discharge is due to the clear mucus secreted from the activated endocervical glands. The diagnosis is simple; physical and microscopic examination and culture of the discharge help differentiating the two. The average age of patients presenting with physiological leucorrhoea is11.5 years which corresponds to the age of menarche, but it may occur as early as at 6 to 8 years.

On many occasions, infestation with Enterobius vermicularis (threadworms) can result in secondary bacterial vaginitis with vaginal discharge (with the threadworms carrying infection from the rectum to the vagina). Fungal infections of the urethra-vaginal area are also common in places with hot humid climates. Treat with local application of an antifungal agent if the

vagina is red or excoriated; prescribe suitable antibiotics if the vaginal discharge contains pus. Inform the adolescent if threadworms are present and advise her to wear loose-fitting clothes. Tell the female to maintain proper hygiene and to keep the perineum as dry as possible. Reassure the mother about physiologic vaginal secretions.

Fungal infection with Candida albicans is more common and responds to both oral and topical antifungal therapy. Pyogenic infection with foul smelling discharge may be associated with foreign bodies or sexual abuse.

Breast Problems:

As one of the most obvious signs of puberty, breast development is often the focus of attention and a cause of anxiety particularly when the growth is asymmetric. Rarely, asymmetry iso marked as to create self-consciousness when consideration may be given to corrective surgery. This can be done only when breast growth is fully completed. The most common of adolescent breast disorders is the presence of a mass, the majority of which are benign cysts or fibroadenomas. Cysts vary in size over the course of a menstrual cycle so re-examine the patient two weeks after the initial examination. Persistence of the mass or its enlargement over three menstrual cycles is an indication for surgical consultation.

Precocious Puberty:

Different societies have their own age range for pubertal development. As a rule breast development before 8 years of age or the onset of menstruation before 9.5 years is considered precocious. It may be dependent or pseudo precocious in which case there is premature activation of the hypothalamo-pituitary gonadal axis. Refer such patients to a specialist for further management.

NUTRITIONAL REQUIREMENT OF ADOLESCENTS

Adolescence is an important stage of human development.WHO defines 'Adolescents' as individuals in the 10-19 years age group. There are about 350 million adolescents comprising about 22% of the world population. The transition from childhood to adulthood involves dramatic physical, sexual, psychological and social developmental changes, all taking place at the same time. In addition to opportunities for development this transition poses risks to their health and well being.

Adolescence is a nutritionally vulnerable period because of its characteristic rapid physical and psychological changes. In developing countries, the risk of under-nutrition is very high during this period and can lead to short stature and various nutritional deficiencies. Appropriate nutrition is important for maintaining optimal health and normal growth and development as well as for preventing future chronic disease. In developing countries, because of unfavourable circumstances, children are often not able to achieve their optimum growth in the early part of their lives. A balanced nutrition helps growth in adolescents.

ADOLESCENT GROWTH SPURT

Adolescents also undergo a very rapid growth during their puberty (called the pubertal growth spurt). During the pubertal growth spurt, they increase rapidly both in weight and height. Therefore, they need a nutrient intake that is proportional with their rate of growth.

Adolescence is a period in which the growth spurt is maximal. At about 15–16 years (the pubertal period) there is a sharp rise in growth rate Males and females may grow at a rate of 10 and 8 cm per year respectively. As a consequence, absolute demands for nutrition are great. Failure to consume an adequate diet at this time can disrupt normal growth and pubertal development.

Higher intakes of protein and energy for growth are recommended for adolescents. For most micronutrients, recommendations are the same as for adults. Exceptions are made for certain minerals needed for bone growth (e.g., calcium and phosphorus). Evidence is clear that bone calcium accretion increases as a result of exercise rather than from increases in calcium intake. Since weight gain often begins during adolescence and young adulthood, young people must establish healthy eating and lifestyle habits that reduce the risk for chronic disease later in life.

Energy:

Energy needs for individual adolescents vary according to sex, age, body size, pubertal development, and physical activity. An adequate caloric intake during adolescence results in healthy adults, reduction in stunting and abnormalities of pelvis; (these may be associated with problems in delivery and low birth weight).

The adolescents need at least two large mixed meals and some snacks each day. They can eat bulky food. Boys need a lot of calories. Girls need plenty of iron. Pregnant adolescent girls are still growing so they need more food than pregnant women.

As the adolescents are still growing, it's vital that they are given enough good quality food and the right kinds to meet their energy and nutrition needs.

Being a teenager can also be difficult as their body shape changes. These physical changes can be hard to deal with if they aren't what they are expecting. There can be pressure from friends to be or look a certain way, and this might affect the foods they eat. It's not a good time to crash diet, as they won't get enough nutrients, and they may not reach their full potential. Following a sensible, well-balanced diet is a much better option, both for now and in the long term.

As a teenager, they start to become more independent and make their own food choices but as they are still growing, they need to take extra care to get enough of some important vitamins and minerals to feel good and be healthy.

INTERVENTIONS TO PROMOTE HEALTH NUTRITION

Health education in schools and through the mass media should include messages related to adequate dietary intake by adolescents. The bioavailability of non-haem iron from plant foods can be increased by taking foods rich in vitamin C. Avoiding tea with meals will also increase the uptake of iron from the gut. A low calcium intake (diet deficient in milk, lassi, yogurt, eggs) can result in poor development of pelvic bones in females with adverse obstetric consequences. On the other side of the scale, problems related to overeating 'junk' food are frequently reflected by obesity, with later complications of atherosclerosis, hypertension, hyperlipidemia and diabetes. It is important to control the diet at this age to prevent such

complications in the future.

Puberty goiter, a well-known entity during adolescence, can be prevented by the constant use of iodized salt. Such information should be given widespread coverage for the population in urban and rural areas of the country. Other nutritional problems are related to psychosocial reasons resulting on conditions such as bulimia or anorexia nervosa. Both over-eating and anorexia can also be due to anxiety and depression; they occur more frequently in female adolescents and can result in severe and permanent damage to their body and psyche. Hence, such disorders should be handled comprehensively and aggressively right at their onset. Referral for further treatment in both the cases is highly recommended

Snacking (eating between meals) is a common phenomenon among adolescents. Snacks that adolescent consume are of high caloric and low

THE ADOLESCENT DIET:

Eating three regular meals a day with some snacks will help them meet the nutritional needs of adolescents. Skipping meals means they will miss out on vitamins, minerals and carbohydrates, which can leave their lacking energy or finding it hard to concentrate. FWWs should use the following guide to help them understand the value of what they eat.

- Breads, grains and cereals are carbohydrates that provide energy for their brain and muscles. They're also an excellent source of fibre and B vitamins. Without enough carbohydrates they may feel tired and run down. Try to include some carbohydrates at each mealtime.
- Fruit and vegetables have lots of vitamins and minerals which help boost their immune system and keep them from getting sick. They're also very important for healthy skin and eyes. It's recommended that the adolescents should eat two serves of fruit and five serves of vegetables a day.
- Meat, chicken, fish, eggs, nuts and legumes (e.g., beans and lentils) are good sources of iron and protein. Iron is needed to make red blood cells, which carry oxygen around the body.
- The adolescent girls start to get their periods, and this leads to loss of iron. If they don't get enough iron, they can develop anaemia, a condition that can make their feel tired and light-headed and short of breath. Protein is needed for growth and to keep their muscles healthy. Not eating enough protein when they are still growing, or going through puberty, can lead to delayed or stunted height and weight. Not enough protein is common when they go on strict diets. Include meat, chicken, fish or eggs in their diet at least twice a day. Fish is important for the brain, eyes and skin. If affordable, it is a good option to eat fish 2 to 3 times a week. If an adolescent is a vegetarian or vegan and does not eat meat, there are other ways to meet their iron needs, for example, with foods like baked beans, pulses, lentils, nuts and seeds.
- Dairy foods like milk, cheese and yoghurt help to build bones and teeth and keep heart, muscles and nerves working properly. They need three and a half serves of dairy food a day to meet their needs.
- Eating too much fat and oil can result in putting on weight. Try to use oils in small

amounts for cooking or salad dressings. Other high-fat foods like chocolate, chips, cakes and fried foods can increase their weight without giving their body many nutrients.

- Fluids are also an important part of their diet. Drink water to keep hydrated, so they won't feel so tired or thirsty. It can also help to prevent constipation.
- It is better not to drink flavoured waters or sports drinks because they can lead to more weight gain.
- Nutrition & Nutritional Problems:
- There are certain nutritional problems that are important for this age group and need to be addressed.

Iron deficiency Anaemia:

This is the most prevalent dietary deficiency especially among older adolescent girls, lower socio-economic groups and pregnant teenagers. Iron deficiency is due to rapid growth and increased iron loss during Menstruation among girls. Iron deficiency anemia is known to be associated with less-than-optimal behaviour, poor school performance and disruptive behaviour. Studies have shown that even a mild level of anaemia can compromise physical performance. The daily allowance for iron is 12mg and 15mg for adolescent boys and girls respectively. Adolescents should be encouraged to eat iron-rich food. The bioavailability of non-haem from plant food can be increased with fruits and vegetables that contain vitamin C.

Calcium deficiency:

Calcium intake tends to be low in the adolescent diet. Inadequate calcium intake causes poor bone growth especially of pelvic bones in girls may affect their future reproductive capabilities. Adequate calcium in the adolescent diet ensures optimum bone growth and decreases the risk of osteoporosis later in life. Foods rich in calcium are milk, yogurt (1 cup = 300 mg of calcium approximately) and cheese (30 mg = ½ chatak = 200 mg calcium).

Iodine deficiency:

The northern areas of Pakistan are one of the most severe endemic areas for iodine deficiency disorders with prevalence as high as 70 percent. Other regions reported to be affected include the plains of NWFP, Punjab, Sindh and Baluchistan. The groups of people who are at a higher risk include pregnant women, adolescent girls and boys, and children born to iodine deficient women. In Pakistan, and particularly in endemic areas, the use of iodized salt is the best means of preventing iodine deficiency disorders. All community members should be advised to use iodized salt in place of non-iodized salt daily throughout their lives.

Risk of Hyperlipidemia:

Teenagers must be able to recognize diet related risk factors for hypertension, heart disease and osteoporosis, and to understand the methods of minimizing them. The most important risk factor is the type and amount of fat in the diet. Dietary fat intakes should not exceed 30

percent of total calories and saturated fat intakes should not exceed 10 percent of calories. be restricted and the teenagers need to be educated about the dangers of fast food, intake of which so common these days.

Programs are needed that help adolescents understand the importance of fitness as well as how to attain it by planning more physically active lives for them. Encouraging physical activity in children and adolescents helps to establish exercise as a lifelong habit, teaches relevant skills, and develops endurance, muscle strength and flexibility. A physically active life also reduces the prevalence of obesity, injuries associated with disuse, the potential for osteoporosis and coronary artery disease. It also helps in rehabilitation from illness and injury and increases self-esteem.

Obesity:

Adolescence is sometimes accompanied by a rapid increase in weight. Irrespective of the underlying metabolic processes of the individual, it is closely associated with overeating or with eating carbohydrates predominantly. Adolescent obesity of a minor degree tends to disappear by the age of 20 years if the appetite is reasonably controlled. Obesity of a gross degree, however, requires strict dietetic control (1000 cal / 24 hr). Persistent and progressive obesity affects future menstrual and reproductive functions in girls, as well as their health in general.

Nutritional guidance for the community:

The nutritional status of adolescents is critical to their own growth and development. For girls, it is also critical in their preparation for future roles as mothers. Promoting adequate nutrition will provide them an opportunity to enjoy a healthy life, healthy pregnancy and healthy children, with the least number of perinatal complications.

The concept of all four food groups should be reinforced to young adolescents especially girls. The need for extra serving of milk/ yogurt and fruit/ vegetables should be stressed upon.

Skipping meals is another phenomenon seen in this age group which leads to under-nutrition and poor development. Health care personnel should discourage this practice. Apart from nutritional deficiencies, the adolescent period is critical for prevention of certain adult diseases like obesity, atherosclerosis, hypertension, coronary heart disease, etc. Early dietary modification may help reduce associated morbidity and mortality.

RH CONCERNS DURING ADOLESENCE

- Early Marriages
- Teenage Pregnancy
- Maternal and Infant Mortality / Morbidity
- Adolescence sexuality
- Sexual Violence
- STIs and HIV & AIDS

Early Marriages:

Many families favour or promote early marriage and early child bearing. Early marriage puts a lot of emotional, physical and social stress & strain on youth. They are expected to fulfill their responsibilities in all fields as “mature adults” whereas they are not. The youth should be given ample time for making such adjustments. The youth should be allowed to complete their growth (with balanced diet &time) and education; hence marriage should be delayed in early adolescents.

Teenage / Adolescent Pregnancy:

Teenage / Adolescent pregnancy has a significant impact on the nutritional status of the mother and the outcome of the pregnancy. Increased nutritional requirement for the growth spurt, together with the stress of pregnancy, results in a very high nutritional demand. Failure to meet the increased nutritional requirement causes poor weight gain during pregnancy, and higher incidence of low neonatal birth weight, prematurity and perinatal mortality. In developing countries, apart from the low maternal age and physiological immaturity, environmental factors play a very important role. There is, thus, a need for increased obstetric and neonatal care and social support.

Nutrition is an important part of perinatal care for all women, especially young adolescents who have not completed their own growth and may compete with the fetus for nutrients. Specific nutrients, such as vitamins A and C, folate, iron, calcium, and zinc are often deficient and may increase the need for nutritional supplementation during adolescent pregnancy.

Pregnancy before the age of 18 to 20 years may be harmful to the health and well-being of the girl. Specially, as it can involve serious obstetrical, psychological and other health risks;

- Pregnancy complications
  - Pregnanacy induced hypertension
  - Malposition
  - Cephalo pelvic disproportion
  - Hypertension
- Spontaneous Abortion
- Premature birth
- Low birth weight babies
- Childbirth Complications
  - Prolonged / obstructed labor
  - Toxemia of pregnancy
  - Haemorrhage

Maternal And Infant Mortality / Morbidity:

Poor nutrition and poor development in young females along with deficient care during

antenatal, natal and postnatal period leads to increased morbidity and high mortality in both the young mother and the infant. In case of unsafe rates are high in young girls.

Sexual Violence: Both boys and girls are subjected to sexual violence by the unsocial elements of the society. In girls this may sometime result in pregnancy.

STIs and HIV & AIDS: The sexually transmitted infections occur more in the sexually active people which are mostly the youth. Hence youth should be informed about STIs and their causes & consequences and educated for their prevention. Safety lies in faithfulness to the spouse and use of condom during sexual intercourse.

PSYCHOSOCIAL PROBLEMS IN ADOLESCENCE

The problem of adolescence is that the adolescent regards herself / himself as grown up and an adult, whereas physical and emotional maturity is not achieved until several years after the menarche. The management of the adolescent is difficult and is directed to ensuring that a balanced adult emerges from the testing period. They should not be teased or ridiculed, and their move towards independence respected and controlled within limits. Affection and trust should take the place of orders. They should be encouraged to be continually occupied in either work or healthy recreation within the limits of their physical strength.

Above all, parents must be ready to accept and even encourage the disappearance of childhood ties and dependence. Failure to do so means that their children will never adequately fulfill their intended roles as adults. It should be recognized that some girls are extremely embarrassed by changes in their figure, especially by the development of the breast, which they may attempt to hide by adopting a round shouldered posture. Such girls are sensitive to comment and are helped by the provision of loose-fitting upper garments.

The onset of menstruation in girls and nocturnal ejaculation in boys may arouse emotions of fear and shame in uninformed adolescents. This may give them psychological shock that may be difficult to cope with. Failure of adolescents to realize the implications and potential dangers of sex can lead to tragedy. Sex education should come naturally and piecemeal throughout childhood. Even infants are curious about their genitalia and their curiosity should be satisfied.

Children inevitably ask questions, and these should be answered simply but truthfully as they arise. Indeed, sex instruction should be merely part of the general education of the child, acquired from day to day during family conversation and becoming more detailed with the passing of time.

For the adolescent, there may be a place for additional and more formal instruction such as sex education through schools, but this should not be out of context of human biology. In the later part of adolescence, girls are developing opinions about childbearing and feeding

At this time, it is important to provide them with correct and convincing information about appropriate practices, particularly breast feeding, contraception and birth spacing.

Independence-dependence:

Young people are testing their need for independent action, decision-making and emotional separation from their parents, while at the same time still feeling dependent on their parents for emotional, physical and financial support. Intimacy: The young person develops close relationships with same sex friends and becomes interested in intimate relationships with young people of the opposite sex. They want to feel loved and cared for, and to be accepted as normal. They are curious to learn what place sexual expression has in relationships.

Integrity:

The young person is beginning to formulate a value system to guide their choices. They make decisions about which of their family's values and beliefs they will adopt and where their own values will be different from those of the family. Social and psychological changes, which occur during adolescence, can affect both the behavior and thinking of young people, and also their relationships with other people. It is important for parents to understand the influence that these changes can have on their children's behavior, and to maintain good communication with them.

The adolescents by communicating with or seeking help from parents, teachers and health workers they can often find a solution to these problems. Through self-awareness not only can they have self-control but they can also master their emotions. If they are responsible in their behavior it will also help them to anticipate situations and consequences and make the right decisions. Positive thinking and good communication will help them to solve problems. If they respect themselves and others, especially the opposite sex this will help in maintaining healthy relationships. It is important for them to know that they have to pass through this stage one way or the other and they will cope with it better if they can develop certain qualities and skills to help them during the process of adolescence.

Substance Abuse:

The increasing complexity of modern society and easier availability of street drugs are factors responsible for the increasing rate of substance abuse. There is no pathognomonic clinical presentation and the key to a diagnosis of drug abuse is to maintain a high degree of suspicion. Risk factors for adolescent drug abuse include family history of drug abuse, increased availability of drug in the environment, peer choice, significant parental conflict, unstable child parent relationship and poor academic performance. Indirect clues are multiple functional complaints, lack of interest in self-care, and deterioration in family relationships and school performance. Physical examination is generally not very helpful except for occasional thrombophlebitis. Treatment is difficult and not clear cut. Helpful resources need to be identified and utilized; they include schoolteachers, family members and relatives, sympathetic friends, the psychologist and frequent counselling. It is very important to identify and resolve underlying stress, if any, leading to the drug abuse.

Sexual Abuse:

Adolescents and youth are subjected to exploitation and sex abuse such as abduction, rape and incest, pornography, trafficking, abandonment and prostitution. When they are exposed to the unsocial elements in the society while earning their livelihood from petty jobs like shoe

polishing, massaging, selling garlands & flowers, begging in streets and working in the workshops & factories, etc.

Sexual abuse is being recognized as an increasing problem in our country but many cases remain unreported. Both boys and girls are affected. The child usually presents with vague symptoms such as late onset bedwetting, vague pains, sleep disturbance and falling behind at school. Symptoms of cystitis and gonococcal infection, hysterical outburst and running away are other manifestations in older children.

Depression and Suicide:

Adolescence is a time of increased emotionality, hypothetical thinking and empathy. As a result, it is a time for mood swings from the depths of depression to the heights of elation. It is often difficult to decide which sad looking adolescent is at risk of depression and even suicide (deliberate self-harm). The hallmarks of the youngster who is at risk are: the persistence of depressed mood, absence of corresponding periods of elation, decreased mobility of function and expression of hopelessness and helplessness.

Assessment of the adolescent's functional status should focus on school performance and on peer and family interactions. Symptoms of depression in the adolescent may include falling school grades, an increase in school absenteeism or truancy, the use of alcohol and drugs, and pervasive boredom. Alternatively, persistent euphoria may mask expression. Initial insomnia and difficulty in falling asleep, sometimes to the extent of sleeping all day and remaining awake at night without ever feeling rested are common signs of depression in adolescents. A family history of depressive illness increases the likelihood of depression particularly if the history includes suicide attempts.

In severe depression when suicide is suspected, the physician should ask if the patient has ever felt so sad that death was considered to be a preferable alternative to living. If the patient answers in the affirmative, inquire about the existence of a plan for self-destruction. Refer the patient immediately to a psychiatrist for appropriate evaluation and management. The adolescent who is not contemplating suicide will not be harmed by such questioning and is often relieved to have an opportunity to discuss his or her concerns with a caring physician.

Eating Disorders:

In adolescent girls, the need to assume control over one's life may manifest as an eating disorder, either anorexia nervosa or bulimia nervosa. Pre-teen and early adolescent girls, even if they are not overweight, often view themselves as heavy according to the unrealistic standards set by fashion models. Then they grow a few inches and lose a few pounds, and friends start commenting on the change.

For a young woman with low self-esteem who has not had many opportunities to be assertive in the past, the discovery that she can gain attention by altering her body may come as a revelation. In order for her thinness to be noticed, however, she has to continue losing weight. This can be achieved through a combination of non-stop dieting, exercise, and (especially if she also binges periodically) self-induced emesis or use of laxatives or diuretics.

The first episode of an eating disorder should be handled aggressively. Advise hospitalization

for 30 days or longer. Following hospitalization, patients should be closely monitored by an outpatient team consisting of, at a minimum, the primary care physician and a psychotherapist trained in the management of eating disorders. The FWW should refer such adolescent for further investigation

Peer Pressures:

Peer pressure can be positive or negative. It can keep youth participating in bad antisocial or good activities such as religious or volunteer work and sports. To cope with peer pressure, the parents and educators are to nurture the teenager's abilities and self-esteem so they can forge positive peer relationships. Cross-ethnic and cross-class interactions guide teenagers to deal positively with cultural diversity and individual differences. If needed, counsel parents and teenagers. Peer pressure can be used in a constructive and positive fashion by promoting healthy leisure and extracurricular activities. Use intervention programs then encourage sensible group activity including skill-building exercises, group sports, and community service. Also anticipate and prevent negative behaviour, teaching others, whether children or adults, is a useful activity. Promote families, communities, schools and youth groups to work together.

MALE YOUTH

1) Adolescence is the period between 10 and 19 years of age (early adolescence is 10-14 years, late adolescence is 15-19 years and post-adolescence is 20-24 years old). Young people are those aged 10-24 years.
2) Adolescents undergo significant physical, intellectual and psychosocial changes as they move into adulthood.
3) In the process of moving toward independence, young people tend to experiment and test limits, including practising risky behaviour. This makes them especially vulnerable to reproductive health problems.
4) Not all young people are equally affected by negative reproductive health problems. Services need to be targeted toward the most vulnerable, who include young girls in rural areas and orphans.
5) Ethiopia has a population that is predominantly young and likely to grow considerably in the coming years because of the early age of marriage and low levels of contraceptive use.
6) Adolescents and young people have the right to accurate information and appropriate reproductive health services. Laws protect young people's rights.

During adolescence, several changes occur for boys, including the physical, psychological, and social changes associated with puberty, and the majority of male adolescents report the initiation of sexual behavior. Many of these events, including sexual initiation, are associated with preventable consequences that can lead to significant morbidity and mortality. During this same time, the number of health visits typically declines, particularly among older male adolescents, and there is a shift from routine to more time-limited acute visits.

For health care providers, including primary care providers and pediatricians, who care for male adolescents, issues of puberty and sexuality are areas that should be commonly

addressed with the male patient and his family.

Male adolescents' sexual and reproductive health needs often go unmet in the primary care setting. This report discusses specific issues related to male adolescents' sexual and reproductive health care in the context of primary care, including pubertal and sexual development, sexual behavior, consequences of sexual behavior, and methods of preventing sexually transmitted infections (including HIV) and pregnancy.

Pediatricians are encouraged to address male adolescent sexual and reproductive health on a regular basis, including taking a sexual history, performing an appropriate examination, providing patient-centered and age-appropriate anticipatory guidance, and delivering appropriate vaccinations. Pediatricians should provide these services to male adolescent patients in a confidential and culturally appropriate manner, promote healthy sexual relationships and responsibility, and involve parents in age-appropriate discussions about sexual health with their sons.

Addressing male teenagers' sexual/reproductive health includes but is not limited to preventing STIs and HIV. The 1994 Cairo United Nations International Conference on Population and Development and the World Health Organization defined sexual/reproductive health as “a state of physical, mental and social well-being and not merely the absence of disease, dysfunction or infirmity, in all matters relating to the reproductive system, its functions and its processes.”

Sexual health also requires a positive and respectful approach to sexuality and sexual relationships. People should be able to have pleasurable and safe sexual experiences free of coercion, discrimination, or violence. Men, along with women, have the right to be informed and have access to safe, effective, affordable, and acceptable methods of family planning of their choice and the right of access to appropriate health care services.

For health care providers, goals for male adolescents' sexual/reproductive health beyond the prevention of STIs, HIV infection, unwanted pregnancy, and reproductive health-related cancers should include promoting sexual health and adolescent development, healthy intimate relationships and responsible behavior, and responsible fatherhood as well as reducing problems related to sexual dysfunction and infertility

CORE MALE ADOLESCENT SEXUAL/REPRODUCTIVE HEALTH KNOWLEDGE AREAS

Puberty

With pubertal changes and the development of reproductive capacity come questions and concerns. Puberty for male adolescents follows a predictable sequence, but clinicians need to be aware that its timing is variable because of a variety of factors, including heredity and race/ethnicity. For boys, the first visible sign of puberty and the hallmark of the second sexual maturity rating (SMR) stage (SMR2) is testicular enlargement, followed by penile growth (the hallmark of SMR3). During SMR4, a male's testicular volume has reached approximately 9 to 10 cm^3 and his peak height growth typically occurs.

Alterations in Growth Associated with Puberty

Health conditions related to male growth and development are not uncommon, can be quite distressing, and might not be identified until adolescence. The frequencies of more common disorders are 1 in 500 to 700 for Klinefelter syndrome; 1 in 1000 to 4000 for fragile X syndrome; 1 in 5000 to 10 000 for Marfan syndrome; and 1 in 8000 to 10 000 for Kallman syndrome. Other non–STI-related male genital issues that occur during adolescence include gynecomastia (40%–65% of male teenagers), testicular torsion (8.6 per 100 000 males 10–19 years of age), varicocele (10% of males), and testicular cancer (3.1 in 100 000 males 15–19 years of age)

Early and delayed pubertal timing, including short stature, can result in negative consequences for the developing male. Consequences can include higher mean levels of aggression and delinquency. Earlier-maturing boys might have more frequent involvement in risk-taking behaviors, and later-maturing boys might have lower levels of confidence and self-efficacy and increased experiences of teasing, bullying, mental health issues, and substance abuse.

Even a common issue such as acne, which affects 95% of male adolescents, can be related to self-reported embarrassment, lower self-esteem, depression, and anxiety. Given the frequency of these growth and developmental concerns, the typical practicing health care provider will certainly see male patients with 1 or more of these disorders.

Sexuality

Sexuality, as defined by the World Health Organization in 2002, is a central aspect of the human life course and encompasses sex, gender identities and roles, sexual orientation, intimacy, and reproduction. Although sexuality can be experienced and expressed in thoughts, fantasies, desires, beliefs, values, behaviors, roles, and relationships, not all sexuality dimensions are experienced or expressed. One's sexuality is also influenced by a variety of factors including biological, psychological, familial, societal, political, cultural, and religious factors. Before adolescence even begins, boys might be curious and ask questions about sex, body parts, differences between boys and girls, and where babies come from. However, not all parents talk about sex with their children.

A recent study of California teenagers and their parents found that adolescents who reported that their parents had more frequent sexual-related communication also reported feeling closer to their parents, being more comfortable talking with their parents in general, and having more open conversations about sex with their parents. Health care providers are in a position to advise male patients and their parents about the value and importance of repeatedly talking about sex and related topics. Involving parents and sons in sexual health discussions can help reinforce family values and create opportunities for sons to ask clarifying questions instead of relying on misinformation provided by their peers.

Sexual Development

During adolescence, teenagers begin the process of developing a sexual self-concept, which involves the combination of physical sexual maturation, age-appropriate sexual behaviors, and formation of a positive sexual identity and sense of well-being. In early adolescence,

boys might become preoccupied with body changes, become interested in sexual anatomy and sex, compare changes in their body with others, and explore touching and mutual masturbation. Along with the experience of spontaneous erections, ejaculation related to masturbation, and the onset of nocturnal ejaculatory events during sleep (ie, “wet dreams”), there are many reasons why preadolescent and older boys might have questions and anxieties about their emerging sexuality. Later, male adolescents begin to test their ability to attract others through dating and sexual behavior. It is not uncommon for a male to have anxieties and questions about genital size and function, especially when comparing himself to others and after initiating sexual behavior.

Masturbation and Spermarche

On average, the age of first male masturbation occurs between 12 and 14 years of age; most boys learn about masturbation through self-discovery. Masturbation among males is common and ranges from 36% reporting masturbating 3 to 4 times per month to 10% reporting masturbating every other day or daily.Health care providers can reassure male adolescents that self-masturbation is a normal behavior and can be a positive expression of sexuality and a way to delay having sex and its associated risks. Health care providers can also assist male adolescents with information and resources about normal sexual physiology and function that might not otherwise be available at home or school.

Gynecomastia / Male Breast:

This is the most common problem among adolescent males for which they seek advice. It occurs in approximately 2 out of 3 normal boys usually in the mid- stages of pubertal development. It results from high estrogen levels in the blood, which come from the testes directly and from peripheral conversion of prohormones to estrogen. The condition resolves spontaneously in most individuals but should be evaluated if it persists for more than 1 to 2 years and hence referred to the specialist. Sometimes, breast development is asymmetrical in gynecomastia. This, however, does not indicate local pathology.

Night Emissions:

A nocturnal emission is an uncontrolled ejaculation of semen experienced during sleep. It is also called a “wet dream”, an involuntary orgasm, or simply an orgasm during sleep. The fluid is creamy to clear in colour. Nocturnal emissions are most common during teenage and early adult years. However, nocturnal emissions may happen any time after puberty. They may or may not be accompanied by erotic dreams. Some males will wake during the ejaculation, while others will sleep through the event.

Treatment:

Like the hiccups, there are a huge variety of “home remedies” with no scientific basis. Moreover, because no physical harm is caused by the act and it is not symptomatic of any underlying problem, it is generally considered unadvisable to undergo any sort of treatment except in cases of severe psychological trauma.

7.4 UNDERSTANDING REPRODUCTIVE RIGHTS OF ADOLESCENTS

7.4 UNDERSTANDING REPRODUCTIVE RIGHTS OF ADOLESCENTS

Reproductive health rights refer to those rights specific to personal decision making and behaviour, including access to reproductive health information and services with guidance provided by trained health professionals.

Reproductive health rights of adolescents and young people

- The right to information and education about sexual and reproductive health (SRH) services.
- The right to decide freely and responsibly on all aspects of one's sexual behaviour.
- The right to own, control, and protect one's own body.
- The right to be free of discrimination, coercion and violence in one's sexual decisions and sexual life.
- The right to expect and demand equality, full consent and mutual respect in sexual relationships.
- The right to the full range of accessible and affordable SRH services regardless of sex, creed, belief, marital status or location.

These services should include:

- Contraception information, counselling and services
- Prenatal, postnatal and delivery care
- Healthcare for infants
- Prevention and treatment of reproductive tract infections (RTIs)
- Safe abortion services as permitted by law, and management of abortion-related complications
- Prevention and treatment of infertility
- Emergency services.

Although adolescents tend to be less informed than adults, they often have a sense of having unlimited power, feelings of invulnerability and impulsiveness that can lead to reckless behaviour. They are curious and have a natural inclination to experiment. There is conflict between their own emerging values and beliefs and those of their parents and so adolescents may be trying to demonstrate these differences by experimenting with drugs and law-breaking activities.

ADOLESCENT WELL-BEING IS A PRIORITY

Pakistan has a growing population of adolescents. If they become useful members of the society, they can help Pakistan progress and create sensible households. On the other hand, if they are mal nourished and not groomed into responsible health individuals, their and the country's future will suffer.

As a second sensitive development opportunity, after early childhood, adolescence represents an optimal period in life to learn healthy behaviours, acquire social and labour skills and realize human rights protections that have an impact throughout the life course. Investment in adolescent health, well-being and development generates a “triple dividend of benefits” and determines both the present and future health of individuals, as well as that of generations to come.

WHY IS ACTION NEEDED?

Achieving the Sustainable Development Goals (SDGs), including universal health coverage (SDG Target 3.8), requires keeping adolescents informed and healthy, so they can survive and thrive both now and in adulthood, as recognized in the United Nations Strategy for Women’s, Children’s and Adolescents’ Health. However, to fulfil the promises of the SDGs, further support and commitment are required to deliver for adolescents, especially those most at risk of being left behind.

There are now 1.2 billion adolescents (aged 10 to 19) worldwide and this number will increase until 2050. Nearly nine out of ten adolescents live in low- and middle-income countries. The health and well-being of adolescents, now and in their adult lives, depend on their education, skill development, employability, and access to high-quality health services. Adolescents also need a supportive environment that helps them to stay healthy and empowered, embrace gender equality norms and claim their rights.

Adolescents are entitled to information and services that meet all their needs. This includes information and services relating to noncommunicable diseases, injuries, healthy eating and nutrition, mental well-being, risks of tobacco and other substance abuse, physical activity, social support, and the cultivation of healthy relationships. Provision of these should be consistent with adolescents’ evolving capacities, and free of stigma and discrimination, and should uphold their sexual and reproductive health and rights.

Adolescents face multiple barriers in accessing the knowledge, information, health-care services and commodities they need. Most of their health and well-being issues are preventable or treatable, but appropriate care and services for adolescents are often either inadequate or absent. In addition, many service providers do not fully understand their needs. Age-specific challenges can be exacerbated by gender, ethnicity, religion, disability, location, education level, poverty, marital status, sexual orientation and gender identity, and migratory status, among other factors.

Adolescents have not benefited from the reduction in mortality seen in younger children. While deaths in children under five halved during the Millennium Development Goals period, reduction in adolescent mortality has stalled. Each year there are over 1.1 million adolescent deaths. Major contributors include road traffic injuries, suicide, interpersonal violence, HIV/AIDS and diarrhoeal diseases.

Investment in adolescents delivers the “triple dividend”: improving health and well-being now, enhancing it throughout the life course and contributing to the health and well-being of future generations.

A thriving adolescent population fuels economic growth, helping to increase productivity,

decrease health expenditure and reduce inequities across generations.

The World Bank states

> "For every dollar invested in selected adolescent health interventions, there is an estimated ten-fold health, social and economic return.
>
> Investing in best-practice programmes to end child marriage, costing approximately US$ 3.80 per person, could bring an almost six-fold return on investment and cut child marriage by around a third.
>
> Worldwide today, 97.5 million adolescent girls do not attend school. "

CALL TO ACTION

To ensure that every adolescent can make informed choices about their lives, and fulfil their rights to attain full health and well-being, we the undersigned call on governments, donors and the international community to:

Engage adolescents in all legal, policy and programme processes that affect them, by:

1) placing adolescents at the forefront of this call to action and all its related components
2) strengthening national platforms for increased and equitable adolescent engagement in developing policies and programmes that affect them and
3) empowering young people to demand their rights and to hold national systems and institutions accountable so that their distinct and diverse needs are met.

Go beyond the health sector and develop strong multisectoral whole-of-government policy approaches that truly address adolescent health and well-being, by:

1) developing and adopting a framework for adolescent well-being, using a multisectoral and multi stakeholder lens, to ensure cohesive programming for and measurement of adolescent well-being.
2) prioritizing the collection of more and higher-quality data about adolescents that can be disaggregated by age, gender and other characteristics, to guide action and define who they are and what they want and
3) strengthening partnerships at all levels to ensure linkages between the adolescent well-being agenda and broader efforts to address young people's livelihoods, education and skills, as well as productivity.

Strengthen political commitment and funding for adolescents to accelerate action towards 2030, by:

1) increasing the level and effectiveness of domestic and donor spending on adolescent well-being, in line with commitments made on UHC and beyond the health sector,to provide all adolescents with mandatory, prepaid pooled funding for services that

comprehensively address adolescent needs;

2) committing to prioritize adolescent well-being in resolutions submitted at the World Health Assembly in 2021 and beyond; and

3) mobilizing efforts towards a first Global Summit on Adolescents in 2022, aiming to increase significantly the levels of commitment and global funding for adolescents and to accelerate action towards 2030

7.5 CREATING AWARENESS TO EMPOWER ADOLESCENTS FACING RH PROBLEMS IN SOCIETY

7.5 CREATEING AWARENESS TO EMPOWER ADOLESCENTS FACING RH PROBLEMS IN SOCIETY

Boys and girls become increasingly self-conscious and aware of the changes taking place in their bodies during adolescence. They also begin to be aware of their own sexuality, and feel sexual desire, sometimes quite strongly. This is nearly always a difficult period emotionally, as young people struggle to understand their own feelings and reaction. Their capacity to think in abstract terms and to empathize with others also develops during this time.

Emotional ups and downs or “mood swings” are also characteristics of adolescents, making them emotionally unstable. This is partly caused by the upsurge of the hormones as well as worries about the physical changes happening to them.

Social Adjustment: -

In most societies, becoming accepted as an adult is determined more by tradition and cultural values than by age or physical size. Adolescence can be a difficult and confusing period. Adolescents may want to be recognized as adults, but their peers, parents and society in general may not see them that way yet.

Psychological and Social Changes

- Adolescents may feel worried and embarrassed about body changes, growth of hair, acne.
- They may feel self-conscious about their body and how they look.
- They often feel awkward, shy and confused.
- It is normal for them to be attracted towards the opposite sex.
- There may be changes in mood - feeling high or low- without reason.
- Girls may become very sensitive and emotional just before menstruation.
- Guilt feelings and confusion may occur because of sexual feelings. Erections, ejaculation, and wet dreams may occur in males.
- Changes in personality may occur. There is usually a desire for greater independence, and to be seen as an individual.
- Lack of self-confidence often develops.
- There may be feelings of anger, confusion and depression.
- Adolescents are usually fonder of going out with friends than staying at home.
- They have a strong need for acceptance by / among their peers’ group, so they may give more importance to the opinion of their peers than their parents.
- Boys may tend to engage in risky and dangerous behavior

WAYS TO HELP THEM

Engage in meaningful adolescent participation:

The primary principle in working effectively with adolescents is to promote their participation, partnership and leadership. Because of the barriers adolescents face when accessing RH services, they should be involved in all aspects of programming, including design, implementation and monitoring.

For example, it is helpful to identify youth who served as youth leaders or peer educators in their communities. These youth can help to address the needs of their peers during programme design and can assist with implementing activities, such as condom distribution, peer education, monitoring of youth-friendly health services and referrals to gender-based violence counsellors.

Services will be more accepted if they are tailored to needs identified by adolescents themselves. Adolescents may be helpful in ensuring that the MISP also addresses their needs, for example, by identifying culturally sensitive locations to make condoms available.

Community involvement:

Understanding the cultural context and creating a supportive environment is critical to advancing RH services for adolescents as these may be affected by community values regarding adolescent reproductive and sexual health. Adults frequently become especially protective of cultural norms and the process of socializing youth when an emergency occurs.It is important to make priority toRH information and services available, for adolescents. Community members, including parents, guardians and religious leaders, must be consulted and involved in developing programmes with and for adolescents.

SERVICE PROVISION PRINCIPLES

Privacy, confidentiality and honesty:

Adolescents presenting to health providers often feel ashamed, embarrassed or confused. It is important for providers to create the most private space possible in which to talk. Information is disseminated rapidly among adolescents and if their confidentiality is breached even once, youth will not access available services.

Linking simple adolescent problems, like menstrual issues, treatment and care, and reproductive health:

When adolescents access health services seeking HIV information, testing and care, there is an opportunity to promote comprehensive RH services such as:

- safer sex, including the use of dual protection
- family planning methods
- STI counselling and treatment

Sex of the service provider:

Whenever possible, an adolescent should be referred to a provider of the same sex, unless they prefer otherwise. Ensure that adolescent survivors of gender-based violence who are seeking support and care at a health facility have a female support person present in the examination room when a male provider is the only person available. This is essential when the survivor is an adolescent girl, but it is important also to give this option to adolescent boys who are survivors of gender-based violence.

7.6 MANAGEMENT OF ADOLESCENT REPRODUCTIVE HEALTH ISSUES

7.6 MANAGEMENT OF REPRODUCTIVE HEALTH PROBLEMS OF ADOLSCENTS

According to Population Census 1998, forty-three percent populations (about 55.0 million) is below the age of 15 years in Pakistan, hence, a sizeable population is within the growing up group (according to WHO the adolescent age group is 11-21 years). Conservative environment prevents both girls and boys from learning about their physical and emotional changes. Lack of information leads to inappropriate practices to hide or delay the changes and / or also causes undesired psychological trauma. Furthermore, many adolescent girls face teenage pregnancy, as a result of early marriages, and are often physically and emotionally not prepared to handle childbearing and rearing. Even though, the age at marriage of female is rising in Pakistan, the magnitude of girls marrying and getting pregnant before age 18 is still quite sizeable.

Programs which work on adolescent girls are limited to few NGO initiatives, whereas, for boys they are almost non-existent. RH Services Provider will respond to the information and health needs of the 10-15 years population group keeping in view the societal norms. Appropriate information about the physiological body changes will be provided to them through community- based female or male workers and in service delivery facilities through female and male staff. Misconceptions and fears about beginning of menstruation in girls, night emissions in boys, etc. will be dealt with. Hazards of teenage pregnancy will be highlighted to both girls and boys.

Appropriate management of problems like balanced nutrition, early / delayed menarche, imperforate hymen, dysmenorrhoea, vaginal discharge, hirsutism, eating disorders, sexual abuse, substance abuse, lack of secondary sex characters, undescended testes, gynaecomastia, etc. will be provided at designated levels.

Adolescent Sexual and Reproductive Health

The public health outcomes of adolescent pregnancy are profound. Adolescents ages 15–19 years are twice as likely to die during pregnancy and childbirth than women older than age 20 years; those under age 15 years are five times more likely to die during pregnancy or childbirth. Complications of pregnancy and childbirth are the leading cause of death for adolescent girls ages 15–19 years in LMICs. Adolescents undergo an estimated 3.2 million unsafe abortions every year. The social outcomes of adolescent pregnancy are also profound, with girls' potential remaining unfulfilled and their basic human rights denied

Programming for Adolescents

Providing adolescents with the means to attain high standards of health, in ways that ensure equality, nondiscrimination, privacy, and confidentiality, is an integral part of respecting and protecting globally accepted human rights Ensuring that adolescents have access to sexual and reproductive health services requires extending the availability, accessibility, acceptability, and quality of the information and the service. Helping adolescents make a healthy transition to adulthood involves programs to protect them from unintended pregnancy, sexually transmitted infections (STIs), and poor reproductive health outcomes. These programs can enable young people to delay sexual activity, to protect themselves from pregnancy and STIs once they do initiate sexual activity, and to ensure that sex is not

coerced.

The range of suggested interventions include strengthening the enabling environment and providing information and services and support programs to build resilience and assets.

ENABLING ENVIRONMENT

Provide legal protection.

Although the need for strong legal protection for adolescents is clear, few interventions have been documented or evaluated. Still, laws protecting against child marriage and against rape and other forms of gender-based violence clearly need to be developed and implemented.

Reduce gender-inequitable norms and violence.

Norms about acceptable behavior for males and females strongly influence the socialization of children and adolescents; gender disparities become more evident as children near adolescence Gender norms tend to dictate that girls should be sexually submissive, while boys should be sexually adventurous; these norms promote the acceptance of gender-based violence, place girls at risk of unintended pregnancy, and put both girls and boys at risk for HIV.Gender norms that accept gender-based violence are harmful to the lives and reproductive health of adolescents.

Keep girls and boys in school.

Staying in school provides a protective effect. Girls who stay in school are less likely to become pregnant, less likely to marry at a young age, and more likely to use contraception. Staying in school also provides a protective effect against HIV acquisition. Interventions to abolish school fees have enabled adolescents to attend or to stay in school

Information and Services

Offer age-appropriate comprehensive sex education. Ensuring that young people have the appropriate information to plan to protect themselves—before their first sexual experience—is vitally important.

As the late Doug Kirby stated, young people around the world are seeking access to reliable information on reproductive health and answers for their questions and concerns about sexuality. “They need information not only about physiology and a better understanding of the norms that society has set for sexual behavior, but they also need to acquire the skills necessary to develop healthy relationships and engage in responsible decision-making about sex, especially during adolescence when their emotional development accelerates

Evidence shows that comprehensive sex education with specific characteristics regarding content and pedagogy, taught by trained teachers, can affect behavior, including delaying sexual debut, decreasing number of sexual partners, and increasing the use of condoms or other contraceptives. It is important to include a discussion of gender norms that can put both male and female adolescents at risk

Use mass media. Multiple mass media approaches have been used to inform adolescents

about sexual and reproductive health issues, particularly AIDS and HIV.Evaluated media approaches include entertainment-education, social marketing, and media channels (television, radio, magazines, and the Internet)). Newer social media approaches are promising, but their effects have yet to be evaluated.

A systematic review of the effectiveness of 24 mass media interventions on HIV-related knowledge, attitudes, and behaviors finds that such programs generally produced small to moderate changes. Outcomes included increased knowledge and behavioral changes, such as reduction in high-risk behavior, increased communication, and increased condom use. A similar review which focuses specifically on media interventions for adolescents, finds similar outcomes, although the review highlights the paucity of results in the literature pertaining to gender-specific and youth-focused interventions.

The four lessons:

- Ensure that the intervention is appropriate for the intended audience.
- Design interventions that go beyond the individual level to include contextual factors, such as improving communication with caring adults, changing gender norms, and linking to services.
- Include a range of media, as well as interpersonal communication.
- Plan for the evaluation at the beginning of the program.

Provide adolescent-friendly contraceptive services.

The importance of providing adolescents and youth with services that are tailored to their special needs has long been recognized Rather than standalone youth-friendly services or separate spaces within services for adolescents, current programming is focusing on mainstreaming adolescent-friendly contraceptive services with existing family planning services. Four components of adolescent-friendly contraceptive services are important to reducing the common barriers adolescents face in accessing services

Components of Adolescent-Friendly Contraceptive Services: Train providers to provide nonjudgmental services that promote gender-equitable norms and encourage healthy decision making by adolescents. Enforce confidentiality and ensure audio and visual privacy.

Interventions in China, Ghana, India, Kenya, Nicaragua, Tanzania, Uganda, and Zimbabwe have shown that providing one or more of the components of adolescent-friendly contraceptive services can increase use of contraceptives or condoms

Expand access to and promotion of the use of condoms
and other contraceptives.

Ensuring access to and regular use of condoms and other contraceptives is an essential element in programs to protect youth from unintended pregnancies and STIs. The use of condoms to guard against STIs can provide the added benefit of safeguarding fertility Promoting condoms for pregnancy prevention, as well as for prevention of HIV and other STIs, could increase condom use for safe sex among young people

Evidence suggests that if condom use is established during adolescence, it is more likely to be sustained in the long term. A review of 28 studies of HIV prevention in Sub-Saharan Africa finds that the effect of interventions on condom use at last sexual activity were generally greater in males than in females, suggesting that “women still experience marked difficulties in negotiating condom use or assuming full control over their sexual activity”

A gender-transformative approach could be to ensure that all adolescent girls receive fertility awareness training, for example, using CycleSmar™ or using CycleBeads® as they begin menstruation as a teaching tool to empower them to know and understand their reproductive cycles and to understand when they can get pregnant

Implement programs for out-of-school and married adolescents.

Most programming for adolescents is school- or health facility–based, yet millions of children and adolescents are not in school. UNESCO estimates that 57 million children of primary school age and 69 million children of lower-secondary school age do not attend school. Mass media approaches and CBP show promise in reaching out-of-school adolescents, although programming for this group is challenging

Building Resilience and Assets

Programs to improve life skills and build resilience to risk factors among adolescents have shown promising results.These programs, which focus on building protective factors to promote success rather than eliminating factors associated with failure, have included a mix of community awareness and engagement of community leaders; assistance to link adolescents with significant adults in their lives, most notably parents; provision of safe spaces for adolescents; and provision of information, services, and the building of skills.

7.7 ADOLESCENT PREGNANCIES

ADOLESCENT PREGNANCY…AN ONGOING TRAGEDY

About 12 million adolescent girls aged 15-19 give birth every year – most in low- and middle-income countries.

An estimated 3.9 million girls aged 15–19 undergo unsafe abortions every year.

In low- and middle-income countries, complications from pregnancy and childbirth are a leading cause of death among girls aged 15–19 years.

Stillbirths and newborn deaths are 50% higher among infants of adolescent mothers than among infants of women aged 20–29 years. Infants of adolescent mothers are more likely to have low birth weight.

The causes of adolescent pregnancies

Several factors contribute to adolescent births.

1) In many societies, girls are under pressure to marry and bear children early. In low- and middle-income countries, over 30% of girls marry before they are 18 years of age; around 14% before the age of 15. Early marriage generally leads to early childbearing, in accordance with social norms.
2) In many places girls choose to become pregnant because they have limited educational and employment prospects and given that motherhood is valued, marriage/union and childbearing may be the best of the limited options they have.
3) Adolescents who may want to avoid pregnancies may not be able to do so because they have knowledge gaps and misconceptions e.g., where to obtain contraceptive methods and how to use them.

The consequences

Early pregnancies among adolescents have major health and social consequences.

1) About health consequences, pregnancy and childbirth complications are the leading cause of death among girls aged 15–19 years globally, with low- and middle-income countries accounting for 99% of global maternal deaths of women aged 15–49 years.
2) Adolescent mothers aged 10–19 years face higher risks of eclampsia, puerperal endometritis, and systemic infections than women aged 20–24 years.
3) About 789 per 100,000 adolescents suffered adverse maternal outcomes in 2015, and nearly 3000 adolescents die each day from preventable causes related to sexual reproductive health (SRH)
4) Additionally, some 3.9 million unsafe abortions among girls aged 15–19 years occur each year, contributing to maternal mortality, morbidity and lasting health problems.
5) Early childbearing can increase risks for newborns as well as young mothers. Babies born to mothers under 20 years of age face higher risks of low birth weight, preterm delivery and severe neonatal conditions. In some settings, rapid repeat pregnancy is a concern for young mothers, which presents further risks for both the mother and

the child.

6) Social consequences for unmarried pregnant adolescents may include stigma, rejection or violence by partners, parents and peers.

7) Girls who become pregnant before the age of 18 years are more likely to experience violence within a marriage or partnership. Adolescent pregnancy may also jeopardize girls' future education and employment opportunities.

WHO response

WHO works with government ministries and departments as well as nongovernment partners to support countries to address adolescent pregnancy effectively in the context of their national and subnational programs. WHO is working closely with partners within and outside the United Nations system to contribute to the global effort to prevent children becoming wives and mothers through strengthening the epidemiologic and evidence base for action, and to supporting the application of the evidence through well designed and well executed programs.

Barriers

Barriers reportedly faced by adolescents include lack of youth friendly and comprehensive SRH services at many health facilities, shortage of trained personnel, conducive environment for adolescents, shortage of information on the services provided, and provider attitudes that are not friendly to young people and adolescents

Inadequate SRH services provided to adolescents increase the risks of unwanted pregnancies, unsafe abortion, HIV, STIs, and mental health problems in adolescents. The under-utilization of the service package also leads to adolescents, especially girls, getting inaccurate SRH information from their peers and uninformed laypeople. Several factors expose adolescents to sexual and reproductive health problems such as taboos surrounding sex education, early marriage, norms and traditions, and lack of promotion of comprehensive knowledge of sexual and reproductive health by public campaigns/entities/government

Conclusion

Adolescent pregnancy is a global phenomenon with clearly known causes, and serious health, social and economic consequences to individuals, families and communities. There is consensus on the evidence-based actions needed to prevent it. There is growing global, regional and national commitment to prevent child marriage and adolescent pregnancy and childbearing. Nongovernment organizations have led the effort in many countries through bold and innovative projects. There is now a small but growing number of nearly 1.2 billion adolescents aged 10 to 19 years old, representing about 16% of the world's population

The International Conference on Population and Development (ICPD) in Cairo 1994, urged governments to make reproductive health services available, accessible, acceptable and affordable to young people. During this meeting, reproductive health needs of young people were discovered to be largely ignored by existing health facilities, educational segments and other social programs. Improving their health could improve economic prosperity in all sectors in committee

Sexual and reproductive health services (SRHS) ought to provide health information, education and counselling, provide of a range of safe and affordable contraceptive methods, quality obstetric and antenatal care for all pregnant girls, testing (pregnancy and HIV), prevention and management of STIs, conduct promotional activities, and encourage active participation of adolescents It is crucial to promote adolescents' health and an essential step toward achieving Sustainable Development Goals (SDGs). The World Health Organization (WHO) has also introduced guidance to help governments and SRH services providers respond to the growing health needs of adolescents and have suggested other interventions like the operation of youth-friendly clubs

SECTION EIGHT

MENOPAUSE AND THE ELDERLY

8.1 MENOPAUSE AND THE ELDERLY

8.1 GERIATIRICS

Gerontology: is the scientific study of the aging process.

Geriatrics: It is the practice of medicine in its preventive, curative or rehabilitative models, in the elderly.

What happens in aging:

Aging is a natural process with physiological changes, many of them merely a decline in the rate of body functioning. A reduction in the metabolic rate of about 7% occurs every 10 years after the age of 30.

Some of the changes include:

1) There is a retardation of the rate of cell division, cell growth and cell repair. Tissues with their cells tend to dry out.
2) A fatty infiltration usually occurs with cellular atrophy, and a decrease in the speed of muscular response and a decline in muscular strength occurs.
3) With a reduction in the efficiency of circulation, endurance is adversely affected.
4) Connective tissues suffer a decrease in elasticity, bones become more brittle as the amount of organic material is reduced, teeth lose their structural integrity, Functions of the digestive system declines, and digestion occurs at a slower rate than before. Some of the nutritional deficiency in the elderly can be attributed to poor digestion and inadequate absorption rather than a poor diet.
5) There is a general decline in the functioning of the nervous system and organs of special senses. Illness, when it occurs tends to prolong because of the reduction in body defense mechanism.

Health and care Goals for the Elderly:

A WHO scientific group has defined the goal for the elderly of health and social services as the “maintenance of a minimum level of autonomy -the ability to function within a given social setting”. It is important to recognize that; aging is regarded as a phase in human normal life and happens usually at the age of retirement from active service. This age is commonly 60 years (in Pakistan). It has become customary to think of anyone beyond this age as being classified as “old”. Yet a person of chronological age 55 could be physiologically older in terms of body functions and mental activity than another individual of age 75 years if the latter is active and mentally alert. Remember that many of the elderly of Pakistan’s population are home bound because of a varying degree of impairment or inability to take active work, a good many are capable of doing active work. Chronic disease and the process of aging are not synonymous, because of the simple reason that many of the elderly are in excellent health.

HEALTH PROBLEMS OF ELDERLY

The older age has its own set of health problems. It is often associated with ill health, weakness, disability and an impression that elderly people constitute a burden on the society.

This is far from the truth. Older people can play an active role in the society if given timely and appropriate support attending to their specific reproductive health needs, Women in this age group may require socio-psychological support and treatment to improve their health status and enable them to lead a meaningful/ purposeful life.

Physiological and physical changes:

These occur in the reproductive organs at different ages, associated with psychological changes. The subject of Reproductive Health issues deals with creating awareness about these changes; thus, preparing the individual to cope with the associated emotional / psychological needs and to improve the quality of life. While health issues related to reproduction and sexuality affect women and men of all ages, women bear most of the associated burden of ill health since they do not have control even over their own lives in a male dominating society.

Situation analysis:

The economic and social impact of this “ageing of populations” is a challenge to all societies. Many countries are currently re-examining their policies in the light of the principle that elderly people constitute a valuable and important component of a society’s human resources. They are also seeking to identify the best ways to assist elderly people with long-term support needs. Recently Violence against elderly at home Bill has been passed to ensure safety of elderly in their homes.

Role of FWW to raise awareness in their community:

1) To enhance, through appropriate mechanisms, the self-reliance of elderly people, and to create conditions that promote quality of life and enable them to work and live independently in their own communities as long as possible or as desired
2) To develop systems of health care as well as systems of economic and social security in old age, where appropriate, paying special attention to the needs of women
3) To develop a social support system, both formal and informal, with a view to enhancing the ability of families to take care of elderly people within the family.

Actions:

The ICPD, Cairo, 1994 declaration states that: all levels of government in medium and long-term socio-economic planning should take into account the increasing numbers and proportions of elderly people in the population. There is a need to:

- Develop social security systems that ensure greater intergenerational and intragenerational equity and solidarity and provide support to elderly people.
- Enhance the self-reliance of elderly people to facilitate their continued participation in society.
- Ensure that the necessary conditions are developed to enable elderly people to lead self- determined, healthy and productive lives and make full use of the skills and abilities they have acquired.

- Give recognition and encouragement to the valuable contribution that elderly people make to families and society, especially as volunteers and caregivers.
- Strengthen formal and informal support systems and safety nets for elderly people in collaboration with non-governmental organizations and the private sector.
- Eliminate all forms of violence and discrimination against elderly people, paying special attention to the needs of elderly women.

Medical Problems in Elderly:

The problems may be categorized as:

- Phyiscal
- Psychological
- Medical

The medical issues include.

- Skeletal System Changes like Osteoporosis and arthritis
- Neurological symptoms
- Vasomotor symptoms
- Renal Problems
- Reproductive Tract changes
- Reproductive tract and breast cancer
- Sensory Changes like vision, hearing, speech & skin changes.
- Diabetes mellitus. Management of diet and medication must not be left to the individual but assistance should be provided by the family members.
- Hypertension. Medication supported by frequent B.P. recording at the home as well as physician's advice must be ensured.
- Cardiovascular disease. Management, timely medication and check up by a physician should be encouraged. Access to cardiologist must be simplified which is not easy in the present health system of the country.
- Prostate enlargement in men. This is natural. But pathological changes call for surgical intervention.
- Depression. Lack of adjustment to the social change and family circumstances causing insecurity may be a factor but the family member's tendency to isolate them may also be a cause.
- Senile dementia. Mental deterioration, slower response and other symptoms are hardly noticed by the physicians. These deserve consideration of the medical professions.
- Loss of Memory i.e., Alzheimer's disease. A genetic disorder with cerebral atrophy, occurs more commonly in the elderly, resulting in loss of memory for recent events,

while recalling past events of young age.

Health Issues of Elderly Including Women and Men Occur Which Need Attention

- Sexual dysfunction
- Menopausal problems
- Prone to fractures
- Cardiovascular Problems
- Inability to cope with daily routine of life.
- Emotional changes
- Occupation related RH illnesses
- Prone to Accidents

Mental Health in Elderly

Mental health in elderly is closely linked with quality of life. Many family caregivers in our communities are themselves elderly, usually a spouse and sometimes an aging parent. The care of people with disabilities is shifting more and more to the community caregivers, at least in the western world.

The development of health promotion programs, for the elderly needs to be based on plans that measures health status of the elderly groups. It should also be ensured that the programs are judged on the capacity to change the health status of people. An important indicator of health status would be quality of life and change in quality of life after the intervention.

8.2 PSYCHOLOGICAL CHANGES IN THE ELDERLY

PSYCHOLOGICAL CHANGES

Aging is generally regarded as that phase in human normal life when body functions begin to decline. This happens usually at the age of retirement from active service. This age is commonly 60 years (in Pakistan). It has become customary to think of anyone beyond this age as being classified as “old”. Yet a person of chronological age 55 could be physiologically older in terms of body functions and mental activity than another individual of age 75 years if the latter is active and mentally alert. The arbitrary age of 60+ is accepted in our society as marking off a segment of Pakistan’s population that has health and health related needs different from those of other segments.

Chronic disease and the process of aging are not synonymous, because of the simple reason that many of the elderly are in excellent health. Those who are not seen by a physician and / or a welfare agency tend to be overlooked in the evaluation of the general health of older citizens. Not less than half the older citizens suffer from some degree of impairments that may mean limited activity. In general, many of the elderly of Pakistan’s population are home bound because of a varying degree of impairment or inability to take active work, a good many can do active work. A lot of this problem is contributed by psychological changes and different status in the family, that the elderly experience.

Low Status of the Elderly

While in the younger age, a person is authoritative and independent and enjoyed a very influential and high status due to their strong financial status and cultural norms. However, in many households, the elderly do not have a strong hold in house hold economy as children learned through formal institutions and no longer dependents upon their parents for them livelihood since they are capable of making a living by adoption of a profession that is independent of their parents.

Their skills and contributions are viewed as outmoded even before they retire. Freedom of taking decision determines the independence and autonomous status of a person. Today’s elderly has less say in the decision making and most of the decisions are taken by their children while decisions by mutual consent are taken rarely.

Psychological Problems and gender inequality

Social support and family interaction can increase and boost the dignity of the older adults and such support has a protective role in the maintenance of mental health. Most of the family members in Pakistan have been noticed while threaten and beating their parents. Majority of these family members have found to be the sons. In psychological abuse of the elderly, the most common is the verbal abuse i.e., passing harsh words and humiliation etc. and calling names are very common and such behaviour of the youngsters affecting both elderly male and female. The youngsters also quarrel with their parents and give arguments every time. Mothers comparatively have been the victim of psychological abuse due to their physical and psychological weaknesses. Similarly, since the fathers have some control over their children therefore the children can’t dare to abuse the fathers easily.

Elderly have got a variety of mental health problems such asanxiety and depression. Such mental health problems have negative impact on the ability to function and result in high rate

of disability. These mental health problems are basically the result of the psychological problems and 40 % of psychological problems are the cause of social problems. The death of a spouse has a negative psychological impact on the survived partner. Most of the family members do not allow the elderly to have a second marriage. While it is possible by getting married to have a life partner which has positive impacts on individual life and is source of psychological satisfaction.

In the present Pakistani society, elderly have lot of mental health problems which need to be addressed. However, studies show that almost two-third older adults having mental disorder do not receive the required mental health services. Depression of elderly is a major public health and a rapid growing problem in both the developing countries and developed world. According to a study, Pakistan has 22.9% of elderly population facing depression. According to a cross sectional study, carried out in Rawalpindi and Islamabad, the prevalence of depression among unemployed elderly individuals is double than the employed people.

Neglect and Isolation

Due to globalization and modern technology, the values of families' get together, sitting in common hujra (community Hujra) and informal relationship with family members have been decreased. Owing to this, the elderly population has been neglected by the family members. Because of this ignorance of the family members the elderly feels isolated from the society. They are not facilitated by their sons and daughters to have meeting or visits and communication with their friends and relatives. Such behavior of the family members creates in them a sense of helplessness and hopelessness. Research indicates that among the elderly, women have been noticed to have feeling of loneliness and isolation because of maltreatment of the family members

Role in Decision Making

Most of the elderly, living in nuclear families, takes most of the decision by themselves regarding household. However, in joint and extended family set up elderly do not have an influential role which they had in the past. Almost all the important decisions are taken by the youngsters. The youngsters considered the elders to be conservative and they regard that the elderly is reluctant to social change.

Being vulnerable, the elderly does not reject the decision taken by their youngsters as the elderly may face negative repercussion of this opposition. Research studies indicate that the elderly have countless concerns over their sons regarding the important decisions. Elderly have not even been informed by their sons while they get married.

Misperception about modernization

Liberalism has changed the social fabric of the society and the direct victims of these concepts have been the present young generation. Youth have been found to have established a neo-local residence after getting married.

In a local study, 61 % of elderly population does not take part in decision making rather they have no say in decision making process regarding household matters. In Pakistan, particularly in Pakhtun society, elderly women have not been influential in decision making

process rather it is the male who decides most of the important household decisions.

Furthermore, the decision-making power by the elderly of the urban area is more as 37 percent as against 26 percent for the elderly of the rural area.

PATHOLOGICAL AGING:

Pathological aging refers to those factors that affect the body in speeding up the natural process of aging and the individual becomes or appears prematurely old. Identifying these factors will enable us to undertake measures of prevention. Certain factors that contribute to premature aging are:

- Repeated infections
- Chronic infections
- Environmental pollution
- Hypertension, degenerative diseases such as arthritis and rheumatism
- Tension and worry
- Irregularity in the mode of living
- Nutritional deficiency
- Smoking
- Inactivity

If these are regulated the process of pathological aging will advance to a natural aging process.

Characteristics of Elderly People:

Although it is not possible to mention any typical features to identify an elderly person. Some of the common characteristic is as follows:

- Increased uncertainty about personal worth with loss of status.
- Insecurity associated with a feeling of inability to meet the demands of life.
- Apprehension about health.
- Difficulty in adjusting from a work routine to one of retirement.
- Inability to find avenues of service that will provide personal satisfaction.
- Difficulty in meeting stress is due to social change and limited incentive for social participation.

DESIRED SERVICE AND PUBLIC DEALING GOALS FOR THE ELDERLY:

The health and well-being for the elderly is the maintenance of a minimum level of autonomy (the ability to function within a given social setting).

The FWW can play an important role in improving the health of the elderly as she has access

to the homes. Even while visiting pregnant women a small discussion with the elderly can help.

8.3 RH ISSUES IN THE ELDERLY

RH ISSUES OF THE ELDERLY WOMEN AND MEN

The common reproductive health issues seen in the elderly women include:

- Sexual dysfunction
- Menopausal problems
- Prone to fractures
- Cardiovascular problems
- Inability to cope with daily routine
- Psychological problems
- Occupation related RH illness

What is menopause?

The word menopause comes from two Greek words “menos” meaning “months” and “pausos” meaning to “halt / end”. It refers to the stopping of monthly bleeding in women. Menopause is a natural biological experience like birth, puberty and menstruation. Menopause simply means the end of menstruation at the time when ovaries can no longer produce the female hormones.

Menopause is defined as the cessation of menstruation for a year or more. To be categorized as menopausal, a woman must have been without vaginal bleeds for at least one year. This period is characterized by high levels of Follicle Stimulating Hormone (FSH) and Luteinizing Hormone (LH) and is associated with a failure in follicular development and exhaustion of oocyte stock resulting in a fall in estradiol secretion. Estrone is the main postmenopausal estrogen, produced by the extra glandular conversion of androgens. As a woman reaches the age of menopause, depletion of the number of viable follicles in the ovaries due to atresia affects the hormonal regulation of the menstrual cycle. It is primarily the lack of estrogens that leads to the symptoms of menopause.

Perimenopause spans over 4-5 years’ period before the cessation of peroids. The earliest changes occur during the menopausal transition, often referred to as perimenopause, when a women’s cycle becomes irregular but does not stop entirely. Although the levels of estrogen are still nearly the same as before the transition, the level of progesterone produced by the corpus luteum is reduced. This decline in progesterone can lead to abnormal growth, or hyperplasia, of the endometrium. This condition is a concern because it increases the risk of developing endometrial cancer.

As estrogen levels change, other symptoms that occur are hot flashes and night sweats, trouble sleeping, vaginal dryness, mood swings, difficulty focusing, and thinning of hair on the head along with the growth of more hair on the face. Depending on the individual, these symptoms can be entirely absent, moderate, or severe.

Hormone levels fluctuate leading to menopause and as a woman approaches menopause, the production of ‘female’ hormones (oestrogen and progesterone) by the ovaries starts to slow down. Hormone levels tend to fluctuate, and woman may notice changes in the menstrual cycle such as:

1) period cycles may become longer, shorter or totally irregular
2) bleeding may become lighter
3) bleeding may become unpredictable and heavy (get advice from your doctor).

Eventually, the hormone levels will fall to a point where your ovaries stop releasing eggs, the periods stop and menopause is reached.

Although fertility after the age of 45 is low, women must use contraception to prevent pregnancy. It's recommended to continue contraception until you have had one year without a natural period if you're over 50 years old, or two years without a natural period if you're under 50.

After menopause, lower amounts of estrogens can lead to other changes. Cardiovascular disease becomes as prevalent in women as in men, possibly because estrogens reduce the amount of cholesterol in the blood vessels. When estrogen is lacking, many women find that they suddenly have problems with high cholesterol and the cardiovascular issues that accompany it. Osteoporosis is another problem because bone density decreases rapidly in the first years after menopause. The reduction in bone density leads to a higher incidence of fractures.

SYMPTOMS:

As public awareness of the consequences of menopause increases, more and more women will come for consultation regarding symptomatic relief of climacteric complaints, and prophylaxis of its long-term consequences. Differential diagnosis of climacteric disorders includes premenstrual syndrome, depression, migraine, and other conditions associated with flushing.

It is important to realize that the symptoms of oestrogen deficiency, loosely termed menopausal symptoms, may begin long before the cessation of menstruation which, as noted above, defines the menopause itself. The physical symptoms of menopause include the classical vasomotor symptoms of hot flushing and night sweats. These are common and occur in at least 70 per cent of perimenopausal women. Their frequency varies widely from a few to several times per day and the duration may be from a few weeks to many years.

Overall, it should be stressed that the severity, duration and nature of menopausal symptoms are highly variable. Symptoms may vary from mild to severe and continue for years.

Menstrual Cessation:

Three classical ways in which the periods cease are:

- Sudden cessation.
- Gradual reduction in the amount of blood loss with each regular period until menstruation stops.
- Gradual increase in the spacing of the periods until they cease for at least an interval of six months. Any patient who bleeds after a gap of six months must be suffering from post-menopausal bleeding and treated as such.

Other Menstrual changes:

Despite the common belief that they are signs of the menopausal change they must be investigated:

- Continuous bleeding
- Menorrhagia
- Irregular bleeding

Cardiovascular Changes:

The commonest and most noticeable symptoms are the hot flushes and night sweats occurring in 85% climacteric women;

- Hot flushes: The flushing are waves of vasodilatation, affecting the face and neck which last for about two minutes and are frequently followed by severe sweating. Several of these flushes may occur in a day and they may be induced by trivial incidents in nervous women. They are often worse at night in bed
- Sweating: The profuse night sweating disturbs the patient's sleep.
- Functional derangements of cardiac action with
- Palpitations and
- Anginal pain
- Coronary thrombosis is alleged to occur more commonly in menopausal women due to oestrogen deficiency, as well as FSH surge.

The function of the heart and great vessels is now known to be affected by the presence and by the relative absence of oestradiol. It has been known for many years that the incidence of such clinical events as myocardial infarction is much lower in pre-menopausal women than in men of the same age but a precise elucidation of the protective role of estrogen has been slow to emerge.

Neurological and Emotional Changes:

- Mental depression is partly due to disturbed sleep caused by night sweats.
- Paraesthesias are sensations of pins and needles in the extremities.
- Headaches and noises in the ears
- Irritability
- Melancholia

Locomotor system Changes:

include the Menopausal arthropathy, Osteoarthritis, Fibrositis, Backache, Intervertebral disc lesions. Whether the basis of these conditions is vascular or endocrinal is questionable as is the role of the menopause in their causation.

Osteoporosis:

Depletion in the calcium content in the bone during advancing age is called osteoporosis.. Bone resorption follows oestrogen deficiency after menopause. The vertebral bones, the distal end of the radius and the head of the femur bone are the most affected, causing vertebral bone compression, leading to decrease in height and fractures.

Urinary Tract Changes:

Oestrogen deficiency at menopause can cause, burning micturition without infection and stress incontinence due to poor vascularity around the internal urinary sphincter. These urinary symptoms are clubbed together under the term urethral syndrome. Menopausal women frequently complain of frequency, dysuria and urgency symptoms which suggest is sometimes taken as urinary tract infection (UTI). Similarly, stress incontinence is also a frequent symptom at this time and in the absence of utero-vaginal prolapse may be attributed to oestrogen deficiency. However, direct experimental evidence of a true relationship is absent.

Endocrine System Changes:

Increased hirsutism is probably adrenal in origin as is perhaps the obesity. Slight degrees of hypothyroidism are also noticed with lowered BMR, raised cholesterol, brittleness of hair, dryness of skin, lassitude and reduction of mental power and concentration

Physical Changes:

All the physical changes are due to decrease in level of oestrogen as follows:

Changes in External Genital Organs:

- Breasts: Regress and reduce in size due to atrophy of the ducts and reduced storage of fat.
- Labia majora become less prominent.
- Labia minora also shrink and reduce in size.
- Vulval skin becomes pale thin and loses its elasticity.
- Introitus becomes narrow.
- Pubic and axillary hair becomes sparse and their growth is retarded

Changes in Internal Genital Organs:

- Vagina: The vagina shrinks and reduces in size. It loses its rugosity and elasticity and becomes dry. The stratified squamous epithelium becomes thin atrophic, and storage of glycogen reduces and pH rises.
- The flora of the vagina changes because of reduced number of Doderlein’s bacilli. Atrophic or senile vaginitis is seen due to these changes a few years after menopause.
- Vaginal dryness is an important symptom of menopause.

- Some patients find it difficult to give a sexual history and thus a gentle, courteous but full enquiry should be made regarding the presence of dryness and associated dyspareunia. This, in turn, can lead to significant disharmony between partners. The vaginal epithelium is dependent on oestrogen for its lubrication and with loss of oestrogen and atrophy of bartholin's glands the epithelum becomes thin and dry.
- Cervix: The cervix atrophies, the glands cease to produce mucous secretion. Obliterative stenosis may result in a senile pyometra.
- Uterus: The uterus is reduced in thickness and size. The endometrium becomes thin, atrophic leaving behind only the Basal layer.
- Supporting Ligaments: The supporting ligaments of the genital tract undergo atrophy and become weak. Leading to increased tendency for utero-vaginal prolapse. The prolapse may become obvious years after menopause.
- Ovaries: Due to follicular exhaustion the estrogen production is decreased leading to ovarian atrophy.

Other changes:

- The skin of the body becomes coarse and thick. Sparse growth of hair appears on the chin and upper lip. These changes are, probably, due to lack of estrogen or / and overactive anterior pituitary.
- Increase in weight is due to changes in appetite.

Psychological Symptoms:

The physical symptoms of menopause are partnesred by a set of psychological symptoms that can be equally distressing and disabling. The perimenopausal years are frequently marked by life events such as divorce, departure of children, death of partner or parents and other stressful occurrences that may contribute to the overall psychological picture. The following symptoms are commonly noticed:

- Mood swings
- Anxiety
- Depression
- Loss of self-confidence
- Loss of recent memory
- Lack of concentration

Changes in mood and depression are due to the fear of losing fertility. The women who are inherently prone to psychological upsets are more likely to develop these symptoms.

General Symptoms:

On the whole, the symptoms of climacteric are vague and multiple. The woman may complain of insomnia, general weakness, fatigue, headache, vertigo, breast tenderness and skin pigmentation.

LONG-TERM HEALTH RISKS WITH MENOPAUSE

A decrease in female hormones after menopause may lead to:
Thinning of the bones (osteoporosis) and an increased risk of fractures
An increase in the risk of heart attack and heart disease, high blood pressure and stroke

Myths and Misconceptions about Menopause:

Many women have myths and misconceptions about menopause. As the menstrual period comes to an end, they recall outdated and erroneous beliefs that menopause is a “change of life” which means illness and incapacitation and an end to their attractiveness and enjoyment of sex, the start of a downhill course to the useless “old age”. These myths of earlier and old times no longer hold true.

MANAGING MENOPAUSE:

Role of a Family Welfare Worker in management of menopausal symptoms is to:

- Keep her / his knowledge updated.
- Understand that menopause is a natural process.
- Provide counselling to the woman to convey that the woman can be very much “productive” even when she is not “reproductive”.

The FWW should counsel about:

- Nutrition and multivitamins
- General exercise
- Relaxation techniques
- Use of vaginal lubricants during sexual act.
- Regular perineal exercises. Kegel exercise, which is voluntary contraction of the pelvic and uro-vaginal muscles.
- Taking control of their emotions.
- Seeking professional help if she cannot cope with daily routine of life.
- Self-examination of breast
- Visual Inspection with Acetic Acid/[pap smear
- Mammography

Provides counselling to the family to:

- Give support to the woman
- Understand the reason for certain type of behavior particularly depression and mood swings.
- Ensure that she follows advice given to her by the health worker or the doctor.

Females are the best resources for counselling because they can:

5 Ts

- Touch the women.
- Talk to women and men.
- Tell women (give information)
- Treat certain ailments / problems
- Take time to discuss even very private or delicate matters related to sexuality.

A healthy lifestyle can help to manage menopause symptoms. Continue to have regular breast checks and cervical screening tests. Unpleasant symptoms of menopause can often be reduced by:

1) healthy diet
2) regular exercise
3) looking after your mental health
4) reducing your stress levels
5) getting enough good quality sleep
6) using light-weight sleepwear and bedding to help with night sweats
7) avoiding trigger for hot flushes like spicy food and lack of exercise
8) quitting smoking

HEALTHY DIET AND MENOPAUSE

Suggestions for maintaining good health through diet at the time of menopause include:
Choose a wide variety of foods, including plenty of vegetables, fruits, cereals, whole grains and small portions of lean meat, fish or chicken.
Increase fluids and eat low-fat dairy foods with high calcium content.

EXERCISE AND MENOPAUSE

Regular exercise is important. At least 30 to 45 minutes on most days of the week will help to:

1) maintain your heart health and improve your general health
2) keep your bones healthy and prevent bone density loss through osteoporosis – particularly weight-bearing
3) and strength-training activities
4) maintain good balance and reduce the risk of injury from falls
5) provide a feeling of relaxation and wellbeing
6) possibly improve hot flushes.

MOOD AND MENOPAUSE

Some women experience mood changes such as mild depression, anxiety and irritability with menopause. These symptoms are often related to physical changes such as hot flushes, night sweats and poor sleeping.

Changes in mood may also arise due to how you are feeling about reaching this stage of your life – particularly if you are experiencing early menopause.

Mood changes can also be related to stressors that women are often dealing with around the time that they experience menopause, such as:

physical signs of ageing

changes to libido

changes to the family unit (such as children leaving home, or divorce)

caring for ageing parents

career changes

financial worries.

Advise the women to seek help if they experiencing significant or persistent changes in mood that last longer than two weeks, as she could be experiencing depression.

SMOKING AND MENOPAUSE

People who smoke may have an earlier menopause than those who don't. It's also important to avoid smoking because of the associated risk of osteoporosis, coronary heart disease and lung cancer.

MENOPAUSAL HORMONE THERAPY

Menopausal hormone therapy (MHT) – previously known as hormone replacement therapy (HRT), and also known as hormone therapy (HT) – effectively reduces many of the unpleasant effects of menopause symptoms.MHT may be appropriate for use in women with moderate to severe menopausal symptoms. For women who have undergone a premature menopause, some form of hormone therapy is recommended until the age of 50 years, unless there is a health reason for not using hormone therapy.

There are many different forms of MHT.

The advice from international experts is that the benefits of MHT far outweigh the risks for healthy women around the time of menopause. It is discouraged now a days, Hormone replacement therapy, (HRT) has protective effects on the cardiovascular system and on osteoporosis. Other benefits include improvement of sexual life and decrease in urinary frequency and dysuria.

Strong and opposing views on hormone replacement therapy (HRT) are held by professional and lay groups, extending from the view that the menopause is natural and physiological, and thus requires no intervention, to the view that it is true hormonal deficiency state and thus should be treated with replacement therapy for life. Between these views is the compromise position that each patient should be examined and counselled on the individual nature of her problems, with HRT being offered only by the qualified doctor when the presence of such symptoms or effects of oestrogen deficiency are such as to interfere with her personal, marital or occupational welfare.

The woman herself has the final say in whether or not she will initiate and continue with such therapy and must only to be prescribed by a qualified doctor

Contraindications

- Absolute
- Present or suspected pregnancy
- Suspicion of breast cancer
- Suspicion of endometrial cancer
- Acute active liver disease
- Uncontrolled hypertension
- Confirmed venous thromboembolism
- Relative
- Presence of uterine fibromyomata
- History of benign breast disease
- Unconfirmed venous thromboembolism
- Chronic stable liver disease
- Migraine

HRT is a very intricate, difficult and a dangerous treatment. Playing with hormones is likely playing with fire. HRT should only be used under strict medical advice and supervision

Other modalities of treatment of Menopausal Changes:

- If hormones are contraindicated, non-hormonal preparations can be given to check osteoporosis.
- Exercise
- Calcium rich diet -e.g., milk and milk products
- Medicinal calcium to all women above the age of 35 years.
- Vitamin A & D capsules / vitamin D tablets are given along with it to enhance the absorption of Calcium.
- Clonidine for hot flushes (prescribed by doctors only)

MENOPAUSE AND COMPLEMENTARY THERAPIES

Some women can benefit from using complementary therapies for menopause. But it is important to remember that ‘natural’ herb and plant medications can have unpleasant side effects in some women, just like prescribed medications.

REPRODUCTIVE HEALTH ISSUES OF ELDERLY MEN

Include general health issues as well as specific reproductive health concerns including:

- Sexual dysfunction
- Occupation related RH illnesses
- Inability to cope with daily routine of life
- Depression

They need health promotion,
Prevention strategies,
treatment and
rehabilitation
Counselling / assurance
Nutrition
Supportive care
And Early diagnosis, referral, and treatment of cancers.

Medical Problems in Elderly:

1) Skeletal System Changes like Osteoporosis and Arthritis
2) Neurological symptoms
3) Vasomotor symptoms
4) Renal Problems
5) Reproductive Tract changes
6) Reproductive Tract Cancer like cancer breast and cancer cervix
7) Sensory Changes like vision, hearing, speech & skin changes.
8) Diabetes mellitus. Management of diet and medication must not be left to the individual but assistance should be provided by the family members.
9) Hypertension. Medication supported by frequent B.P. recording at the home as well as physician's advice must be ensured.
10) Cardiovascular disease. Management, timely medication and check up by a physician should be the motive. Access to cardiologist must be simplified which is not easy in the present health system of the country. Possibly community organization for such services is the answer.
11) Prostate enlargement in men. This is natural. But pathological changes call for surgical intervention.
12) Depression. Lack of adjustment to the social change and family circumstances causing insecurity may be a factor but the family member's tendency to isolate them may also be a cause.
13) Senile dementia. Mental deterioration, slower response and other symptoms are hardly noticed by the physicians. These deserve consideration of the medical professions.
14) Loss of Memory Alzheimer's disease. A genetic disorder with cerebral atrophy, occurs more commonly in the elderly, resulting in loss of memory for recent events,

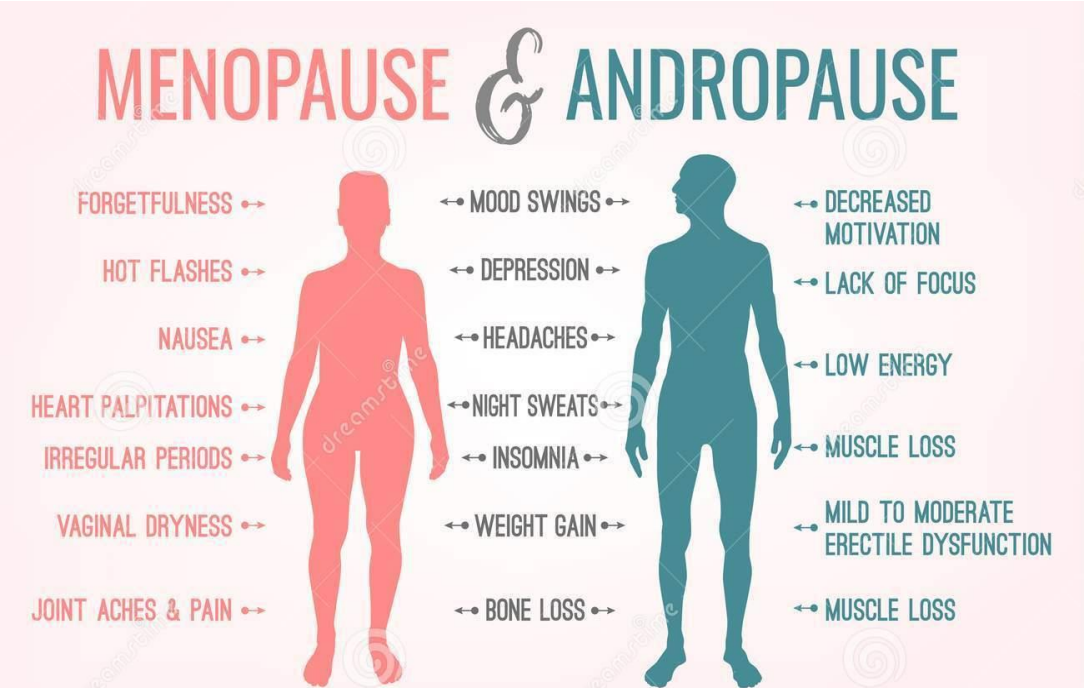
while recalling past events of young age.

ANDROPAUSE

Andras" in Greek means human male and "pause" in Greek a cessation; so literally "andropause" is defined as a syndrome associated with a decrease in sexual satisfaction or a decline in a feeling of general well-being with low levels of testosterone in older man.

Andropause is a condition that is associated with the decrease in the male hormone testosterone. It is unlike menopause in that the decrease in testosterone and the development of symptoms is more gradual than what occurs in women.The subtle changes in the function of the testes can happen as early as 45 to 50 years of age, and more dramatically after the age of 70. For many men, hormone production may remain normal into old age, while others may have declining hormone production earlier on. This can sometimes be a result of an illness, such as diabetes. It's unclear whether decreasing testicular function contributes to symptoms like fatigue, weakness, depression or impotence.

ANDROPAUSE (male menopause): Many names were given to this process like male menopause, male climacteric, androclise, androgen decline in ageing male (ADAM), ageing male syndrome, and of late, and late onset hypogonadism (LOH). True andropause exists only in those men who have lost testicular function, due to diseases or accidents, or in those with advanced prostate cancer subjected to surgical or medical castration.



Symptoms associated with aging

The symptoms of declining testosterone levels can vary significantly from one person to the next. While everyone may experience them differently, the most common symptoms of andropause include:

- Decreased motivation and mood
- Decreased mental sharpness and acuity

- Low energy
- Loss of muscular strength and muscle mass
- Mild to moderate erectile dysfunction

Other common symptoms of andropause can be grouped into the following domains: physical, sexual, and emotional.

Physical

The most common symptoms of andropause within the physical domain are:

- Decreased muscle strength
- Decreased bone mineral density
- Increased body fat
- Fatigue
- Hot flashes
- Loss of muscle tissue
- Decreased insulin sensitivity
- Anaemia

Sexual

Commonly reported sexual symptoms of andropause include:

- Reduced libido
- Difficulty getting or keeping an erection
- Reduced intensity of orgasm
- Small or shrinking testes
- Loss of pubic or underarm hair

.Impotence (Erectile dysfunction):

It is the inability to attain or maintain an erection, firm enough for satisfactory intercourse. Causes can be physiological, psychological or both. After the onset of the problems, a history of repeated erections under any circumstances (particularly nocturnal penile tumescence) is evidence that the dysfunction is physiologic in origin.

Physiologic impotence is caused by either interpersonal or intrapsychic factors including diabetes mellitus, drug abuse, alcohol, narcotics, marital disharmony, depression, pharmacological agents (anticholonergic drugs, antihypertensive medication, narcotics, estrogens), organ system failure (circulatory, cardio-respiratory, renal), surgical complications (prostatectomy, vascular and back surgery) trauma (disc and spinal cord injuries), Endocrine disturbances (pituitary, thyroid, adrenal,) neurologic disorders (multiple

sclerosis, tumors, peripheral neuropathies,) pernicious anaemia, syphilis,

Urologic problems (phimosis, priapism) Congenital abnormalities (Klinefelter's syndrome, hypospadias).

Ejaculation disturbances include:

- Premature ejaculation
- Inability to ejaculate
- Retrograde ejaculation. (One may ejaculate even though impotent). Ejaculation is usually connected with orgasm and ejaculatory control is an acquired behaviour that is minimal in adolescence and increases with experience.

Pathogenic factors are those that interfere with learning control, most frequently

- Sexual ignorance
- Psychic factors (anxiety, guilt, depression)
- Interpersonal mal adaptation (marital problems, unresponsiveness of mate, power struggles) are also common.
- Organic causes include interference with sympathetic nerve distribution, often by surgery or trauma or the effects of pharmacological agents on sympathetic tone.

Emotional

In the emotional realm, the most common symptoms experienced are:

- Decreased energy
- Depressive mood
- Ornery disposition
- Decreased motivation
- Overall decreased sense of wellbeing
- Difficulty in concentrating
- Sleep disturbance

Factors such as age and general health status must always be accounted for when treating andropause.

Sound nutrition and exercise results in improved muscle strength, physical function, lean body mass, and mood are just some of the positive changes that targeted treatment can achieve. A well-established living routine that includes bathing is a health asset for the elderly person. Because the old persons' sensitivity to heat is reduced, it is sometimes desirable that a young person test the temperature of water before the bath. Bathing contributes to a general feeling of well-being

Role of FWWs:

- Keep his wife's knowledge updated.
- Counsel the family members, woman and her husband.
- Advise on nutrition, exercise, and relaxation techniques.
- Refer to the doctor for medical condition
- Arrange follow up
- Do not prescribe medicines like Testosterone or Viagra

8.4 SPECIAL CARE FOR ELDERLY

8.4 SPECIAL CARE FOR ELDERLY

Old age is a sensitive phase; elderly people need care and comfort to lead a healthy life without worries and anxiety. Lack of awareness regarding the changing behavioral patterns in elderly people at home leads to abuse of them by their kin.

Currently, Pakistan predominantly relies on co-residence with family and kin for elderly care. With most of the aged that co-reside living with their sons, provision of care extends from fulfilment of financial needs to health as well as emotional needs. While most of the tangible transfers occur from the younger to the older generation, there is reciprocity — especially regarding childcare for working couples, and at the emotive level, given the culture of respect accorded to the elderly.

The rising life expectancy rates have increased the dependency ratios of the elderly. With fewer children per couple, and increased pressures of migration, elderly co-residence is exhibiting a modest decline in its trend. Similarly, urbanisation may well lead to a breakdown of traditional norms — as workers become increasingly mobile and ‘extraneous’ cultural forces lead to a greater valuation of privacy, we may well see a substantial shift towards nuclear rather than joint family systems.

Birth, childhood, adolescence, adulthood and old age are the most crucial stages in a man's life. All these stages have their very own issues and troubles. As each level passes the physical strength deteriorates as well as the mental stability lessens. Since age progresses, various medical issues happen, some of the known diseases usually are blood pressure, diabetes, heart failure issues, arthritis, cancer malignancy, joint pains, tuberculosis, as well as kidney infections.

It's just not disease that affects old age; there are various other issues that govern the downfall of the health of the old people. One of the main issues is the negligence from the younger generation. Old people need supervision, the laxity to understand the needs and worries of elders make them appear strangers to the younger generation, who later regard them as a burden.

Old people are subject to abuse from family members over property dispute, some of them are even forced to sell their belongings and live in poverty for the rest of their lives. Many of them are too scared to express themselves or fear being humiliated by their loved ones. Elders desire a life with good health, dignity, economic independence and finally a peaceful death. They long for care, love and affection. Understanding their needs and concerns, will ensure their good health. Lending an emotional support to the elders keep them jovial, which is inevitably the ideal way to live a healthy life. However, for many people, providing care and attention to elders is not possible due to work priorities.

PHYSICAL AND PSYCHOLOGICAL CHANGES:

Elders suffering from cognitive challenges undergo serious personality changes; at this point they need care and attention. When they are left unattended, most of them are gripped with overwhelming feelings of dejection, purposelessness; some of them even turn violent. Regardless of the fact that many of us know that aging is a natural progression, and it has its own shortcoming, most of us tend to ignore this and resort to an unruly approach. The aging

process changes both the body and the mind. Many aging changes are physiological in nature, as the body begins to degenerate and break down. Along with these physical changes, emotional variations can also occur. Declining health is a common issue with aging, with many illnesses and diseases plaguing the elderly population. It's possible to take steps to maintain good health as long as possible by remaining active and paying attention to physical symptoms.

PREPARING FOR OLD AGE:

Remaining active is important for staying healthy into old age. Active living can include daily walks, bicycle rides, working in the yard, and spending time outdoors. Daily activity not only benefits the body, but it also benefits emotional health through a sense of well-being. Active senior citizens can maintain their independence for a longer time while enjoying social contact with others in their daily lives. Older people can also benefit cognitively from daily activity due to improvements in sleep patterns and concentration. Eating well with adequate nutrition is another way that the elderly can preserve their health as they age.

Preparation for aging can help with the process. Although many health problems are common with advancing age, people can take specific steps to preserve health and stay active. Getting older does not have to involve rapidly declining health, sadness, and isolation. Instead, older people can purposefully move forward to age successfully, enjoying retirement and a redirection away from the energetic pursuits of youth

HEALTH ISSUES OF ELDERLY

Getting older brings with it a unique set of health challenges. By being aware of the common chronic conditions associated with aging, you can take steps to practice smart preventative care. Caring for elderly requires a certain amount of coordination between healthcare staff, family members, and caregivers.

Handling Special Healthcare Needs

A rapidly aging population brings with it an increase in the prevalence of chronic diseases and their effects. Elderly people often have several health conditions, take several medications and require more interactions with health care providers

Arthritis

Arthritis is the number one condition that people 65 or older contend with. It leads to pain and decreases mobility, as well as lower quality of life for some seniors. Although arthritis can discourage you from being active, it’s important to work with your doctor to develop a personalized activity plan that you can do without discomfort.

Heart Disease

Heart disease is the leading killer of adults over age 65. As a chronic condition, heart disease affects 37 percent of men and 26 percent of women of 65 and older. Illness may interfere with overall health during advancing age. As the body ages, the cardiovascular system does not work as efficiently as it did during youth. With good health, this gradual decline should not cause issues. However, if an elderly person has a heart issue such as coronary artery

disease, more serious problems can occur. It's common for people to develop cardiovascular disease as they get older.

As people age, they're living with more risk factors, such as high blood pressure and high cholesterol, that can increase their chances of having a stroke or developing heart disease.

Cancer

Out of all the risk factors for developing cancer, age is the greatest one. So it's no surprise that 60% of people who have cancer are 65 or older. If you are an older adult with cancer, you are not alone. But you should know that age is just one factor in your diagnosis and treatment.

Alzheimer's Disease

Alzheimer's disease is an irreversible, progressive brain disorder that slowly degrades memory and cognitive skills, and eventually prevents afflicted individuals from carrying out the simplest tasks. In most people with Alzheimer's, symptoms begin to appear around age 65. Estimates vary, but experts suggest that more than 5 million Americans may have Alzheimer's. It's the most common cause of dementia, which is the loss of cognitive functioning and basic behavioral abilities.

Osteoporosis

Osteoporosis means "porous bone." Viewed under a microscope, healthy bone looks like an intricate honeycomb. In people with osteoporosis, the holes and spaces in the honeycomb are much larger than in healthy bone. Osteoporotic bones have lost density or mass, making them weaker and are more likely to break.

Diabetes

Living with diabetes can be tough, even for the healthiest individual. Every day is a new hurdle with unique challenges that you must conquer. As you get older, jumping those hurdles can become more challenging. With old age comes an increased risk of several complications that require preventative care.

Eye changes

Vision changes as people age. It's typical for people to have trouble focusing on close items, and sometimes, perceiving colors becomes difficult. More serious issues such as age-related macular degeneration and cataracts can occur, however. Macular degeneration is a progressive illness that reduces vision significantly.

Other Considerations

Balance issues and falls are a frequent occurrence for elderly people. Falls can be an indication that an elderly person's health is declining. Balance issues are frequent in the elderly population in association with common illnesses such as glaucoma, cataracts, and diabetes. Cardiac problems and inner ear issues can also cause problems with balance. Hip fractures are a common result of falls, with lengthy hospitalizations and declining health

occurring thereafter.

Older adults are more susceptible to serious injury from a fall that most young people would walk away unscathed from. This is because many seniors are frail, and have pre-existing disabilities or medical complications, so even seemingly minor falls can result in severe injury or death. Unlike young people, seniors' bodies simply aren't able to withstand and recover from the trauma. And because they often have compromised immune systems, even a short stay at a hospital puts them at risk of developing a secondary infection.

Appropriate medical attention

Approximately 80% of older adults have at least one chronic disease, and 77% have at least two. It stands to reason that these seniors will need more healthcare attention to address their medical conditions. It's important that the FWW should refer them quickly to a health care provider capable of handling the special health care needs that come with aging.

PERSONAL CARE ROUTINE FOR THE ELDERLY PERSONS:

Mostly elderly people follow a normal course of living. Certain factors are:

Nutrition:

While the quantity of food required by the person in the later years of life is less than earlier years, the qualitative needs are important.

- Diversity of proteins
- Sufficiency of vitamins
- Adequate minerals should be included in daily life
- Foods should be attractive

Should take into account special needs such as cancer or disability

In the later years of life, the output of enzymes is reduced and the rate of digestion is much slower. For this reason, many elderly people find that eating less at each meals and more small meal frequently is a highly satisfactory practice.

Activity:

Unless a physician advises otherwise, moderate activity is highly desirable for the normal elderly persons. Some degree of fatigue during the day is normal, excessive fatigue is harmful. (Activity can be purposeful, such as gardening or performing simple tasks and can be productive). Moderate paced exertion can be rewarding physically, emotionally and socially.

Rest and sleep:

Each person in the old age group adjusts sleep adapted to individual needs however generally elderly people require more rest than young people and especially small naps help them to regain their energy

Safety:

Physical injury and accidental death are high among people in the old age groups. Slow reflexes, poor vision, and the inability to adjust readily to changing situations make the old persons more prone to accident than younger individuals. Conditions in the home should be made safe. Living on the ground floor is an effective safety measure, which prevents the danger of falling off from the stairs. Providing unavoidable manual support during going up and down stairs, well lighted rooms and hallways and even dim light through the night are effective safety measures.

Bathing:

A well-established living routine that includes bathing is a health asset for the elderly person. Because the old persons' sensitivity to heat is reduced, it is sometimes desirable that a young person test the temperature of water before the bath. Bathing contributes to a general feeling of well-being.

Clothing:

Clean clothing adapted to the season and needs perhaps represents a factor in mental health. Extremely important for the elderly is a feeling of pride, status, or worth. A clean and tidy dress can be used to personal appearance and contribute to pleasant and enjoyable living.

Living practices:

The living practices of the elderly should be directed equally towards their mental, emotional as well as their physiological needs. Through such practices, it is possible to create in elderly persons the feeling that they are still very much a part of the community.

Sex:

The elderly enjoy sex as much as the young, although the frequency is much less than the latter. In males erection takes longer and the hardness of the penis lessens. Males have a greater desire for sex than females. Females generally feel relieved to end up with menopause. Sex desire lessens and their interest diverts toward their grandchildren.

Medical Services:

The elderly persons in Pakistan do not enjoy the privileges as in technologically advanced countries. They are not in a position to take their turn for physician's services or checkups in a general hospital. Appointment with consultants, when required by them seems difficult. The families are therefore compelled to pay for the service. In serious cases they have to part with a large portion of their modest property. Welfare agency such as Edhi Trust comes to their rescue for transportation, but the provision of professional services is beyond the scope of the agency.

It is now justified to have special Geriatric Clinics established in the country with a view to offer- coordinated medical and social services to the elderly group. Every individual of this group needs an annual check-up plus emergency care. This cannot be provided at the public hospitals and institutions, which are already facing a heavy patient load.

Rehabilitation:

The ill or disabled elderly person needs more than routine care. When hospitalization is necessary for an aged person, the general hospital can provide all the services necessary for the care and treatment of the patient. But rehabilitation must be a part of the hospital. Both nursing and social services are necessary before the transfer of the patient to his home. Even after reaching home, these services may have to be continued for some time.

Religious Activities:

These activities are necessary for the elderly and many of them participate in religious functions with great zeal. Some take a pride in being active participants in these activities which often give them moral and mental satisfaction and emotional support.

Leisure Time Activity:

The elderly need activities that will occupy them profitably and enjoyably. Most of them enjoy the company of others. They can take up arts and craft, music, dramatics, poetry and creative work when the groups are small. Large groups focus on lectures, parties, excursions and outings. Indoor games such as contract bridge, chess and table tennis are popular games.

8.5 DEVELOPMENT OF HUMAN RESOURCES FOR HEALTH CARE FOR THE ELDERLY

8.5 DEVELOPMENT OF HUMAN RESOURCES FOR HEALTH CARE FOR THE ELDERLY

Professional Programs

There is an urgent need for health workers to be trained to provide high quality care to the elderly. Population aging should be considered in all health care policies, planning and health program activities. Training for health care of the elderly should be conducted at both undergraduate and postgraduate level. Mid-level health professionals including community health workers like FWWs and nursing personnel need to be trained as local supervisors and team leaders. Attention should also be given to traditional health care providers and non-professional categories of health workers who contribute significantly to the provision of services.

Community Programs

Functional programs must be formulated at the community level, because at higher levels the programs will fail to touch individual elderly citizen and their families. In this field the problems of a community are basically threefold:

- Public education in the field of health.
- Integration of all services and forces in the community to offer service to elderly persons, and
- Acquisition and provision of appropriate services that the community does not have.

In all geographically close areas, a health committee should be constituted by the Senior Citizens Association. This committee may serve as an information center and liaison with the Pakistan Health / Medical Association. A community health program undertaken without the full approval and support of the local medical profession is un-likely to flourish.

Primary emphasis in the community program must be placed on public health education. The public needs to understand the nature of aging and the phenomena associated with advancing years. The public should understand what can be done to prevent some of the premature deterioration of age and should understand measures for the prevention of diseases and disabilities of the advancing years.

The public needs to be informed of the contribution various individuals and agencies can make to establish health services and inspection symptoms.

The public needs to realize the importance of such services. A community program to promote the health of elderly people must include attempts to provide the various services required for the treatment, hospitalization, and rehabilitation of those elderly people who have some disability.

Perhaps the greatest contribution such a program can make is to give the elderly a feeling that someone is concerned with their problems and that there is an agency in the community to which they can turn for help.

SECTION NINE

MALE INVOLVEMENT IN REPRODUCTIVE MATERNAL NEW BORN AND CHILD HEALTH

9.1 MALE INVOLVEMENT IN REPRODUCTIVE, MATERNAL, NEWBORN AND CHILD HEALTH

9.1 MALE INVOLVEMENT IN REPRODUCTIVE, MATERNAL, NEWBORN AND CHILD HEALTH

The 1994 International Conference on Population and Development (ICPD), held in Cairo, declared that good reproductive health is the right of all people, men and women alike, and that together they share responsibility for reproductive matters. By emphasizing on gender -- the prescribed roles men and women play in society -- the conference drew attention to the fact that, efforts to promote reproductive health should not be limited to women—men should also be involved. Men need to be educated about sexuality issues including the knowledge and utilization of contraceptives and the need to report early signs of sexually transmitted diseases for prompt treatment.

There are several reasons to involve men in reproductive health. It is well known that when men are provided with information about reproductive health issues, they are likely to be increasingly supportive of their wives to make family planning decisions. Communication among partners is important to ensure that women receive the reproductive health care they need. While for sexually transmitted infections (STIs) programs to be effective, education, testing and treatment must be provided to both partners. Furthermore, by assuming that family planning and reproductive health are solely women's issues, we have not educated men adequately about their own reproductive health needs.

Male involvement:

Male involvement" is used as an umbrella term to encompass the various ways in which men relate to reproductive health problems and programs, and reproductive rights. This is an important foundation for the reproductive behaviours of a society. Male involvement in reproductive health has two aspects:

- The way men accept and indicate support to their partner's needs, choices and rights in reproductive health; and
- Men's own reproductive health and sexual behavior.

Male Responsibility:

This term stresses the need for men to assume responsibility for the consequences of their sexual and reproductive behavior, including caring for their offspring, using contraception if so decided by the couple and practicing safer sexual behaviors to protect themselves, their wives and their families from STIs, including HIV and AIDS.

Male Participation:

Generally, there are more men than women in reproductive health programs, as policy makers, media personnel, religious leaders, managers and service providers, community leaders and heads of households. In this context, "participation" refers to men's supportive role in their families, communities and work- place to promote gender equity, girls education, women's empowerment and the sharing of household chores and child-rearing.

"Participation" also suggests a more active role of men in both decision-making and behaviors, such as sharing reproductive decision-making with their wives, supporting their

choices and using contraception and / or periodic abstinence.

Both the 1994 International Conference on Population and Development in Cairo (ICPD) and the 1995 Fourth World Conference on Women in Beijing provided a foundation for expanding family planning and reproductive health services to include men

Goals of male involvement programs:

- Improve male and female reproductive health
- Provide support for women's actions related to reproduction and respect for women's reproductive and sexual rights
- Encourage safer and responsible sexual and reproductive behavior in adolescents and young men, pre-marital counselling can also be discussed (adolescents: up to 19 years old and young men up to 20-24).

Advantages of male involvement:

Male involvement in reproductive health is aimed to increase men's participation and joint responsibility in all areas of sexual and reproductive health. Sensitizing men to gender issues as an essential intervention to ensure gender equity.

There are numerous and plausible reasons to involve men in RH and FP activities and services. The family system is patriarchal. Males are bread winners in most families. Males are decision makers at all levels. Men remain fertile for longer period of life, are more involved in polygamous relationships, are more mobile and risk takers. Besides, males have better access to information and are more knowledgeable on FP methods. Nevertheless, the burden of FP is on females.

Males should be addressed in RH and FP programs and services as users, promoters and decision makers. Therefore, the following should be considered to ensure male involvement.

- Increasing men's knowledge of reproductive health matters including prevention of sexually transmitted diseases and HIV & AIDS.
- Increasing men's support of the reproductive health choices and RH rights of their wives.
- Improve communication between spouses on sexual and reproductive health issues.
- Increasing men's access to reproductive health information and services and therefore increasing contraceptive use as well as the number of men reporting to health facilities for treatment of sexually transmitted infections.
- Decreasing the number of unwanted pregnancies, unsafe abortions, and STIs.
- Raise gender sensitivity by addressing gender roles and their effects in shaping relations between partners.
- Decrease gender violence in all its forms.
- Improving skills of health professionals by training them in male reproductive health issues.

- Improve communication between couples regarding fertility, FP needs and desires of both men and women
- FP services should address the specific needs of men and shall be made men friendly.
- Males shall be provided with information that enable them to responsibly participate in FP use and decision making.
- Males shall be encouraged to accompany their partners in FP visits.
- Men shall be encouraged and helped to develop responsible adulthood and parenthood and play an important role in preventing unwanted pregnancy and STIs. Condom, the most effective method of protection against STIs next to abstinence is a male dependent method. Men's cooperation is essential to stop the spread of STIs including HIV.
- Information on FP, STI/HIV and other RH issues shall be made available to men through various formal and informal channels including places of work and recreation.

Men should be involved in the design and implementation of FP and RH services and allowed to express ways in which they can be encouraged to take more responsibility. Historically, male involvement in Reproductive, Maternal, Newborn and Child Health (RMNCH) has not been given the attention that it deserves. However, the evidence shows that men who are well-informed about their sexual and reproductive health are more likely to make better health choices for themselves, their wives, and their families than men who lack this knowledge.

It is important to seek to involve, educate and invite men to make well-informed sexual and reproductive health decisions that can protect their lives as well as the lives of their partners and families.

FATORS AFFECTING MALE INVOLVEMENT IN REPRODUCTIVE HEALTH

Even though there has been some success in trying to increase male involvement of reproductive health services, the reality remains that most males do not utilize these services. It is evident that while some positive strides have been taken, some negative influences act to inhibit male involvement.

Positive Influencing Factors:

Despite the many factors that act to inhibit men's involvement in RH services, some factors do exist which positively influence men to access RH services. One of the major factors is the working hours of the men usually coincide with the working hours of the health care facilities. In rural settings, importance of the RH services is often masked by societal and family values

Possible interventions by FWWs include:

- Health care providers can change behavior through counselling and education
- Changing men's attitudes regarding contraceptive responsibility

- Increase awareness about STIs, HIV & AIDS
- Better access to primary health care services.
- Community outreach
- In the recent past communication and advocacy materials and interventions have started focusing on families, rather than women only

Negative Influencing Factors

Reproductive health centers are female oriented.

- Men are not as familiar with the health care system as women.
- Negative attitude of service providers towards male involvement.
- Negative attitude of men towards their involvement in RH
- Lack of awareness and training of men reproductive health issues

LACK OF MALE INVOLVEMENT

The different reasons for lack of male involvement in our country are:

- Cultural and social factors determine male image and influence the sexual practices and male participation in childbearing and child rearing.
- Men are considered the superior partner in the marital relationship. Women are expected to be obedient.
- Reproductive health was limited to family planning in the past. Family planning programs concentrated on fertility regulation mainly through women.
- The programs did not encourage male involvement. IEC material available is mostly for females. Very little male focused material has been produced.
- Men do not suffer from risks of pregnancy and childbirth. Therefore, regulation and control of fertility is considered the domain of women.
- Men are generally hesitant to ask questions about RH and are provided few opportunities to do so.
- Sexual and reproductive health has been women specific and hence leaving out the men
- FP and SRH services are usually in isolation, hence discouraging men to accompany women

IMPORTANCE OF MALE INVOLVEMENT

Involvement of men in reproductive health is beneficial to all. Programmatic efforts can help men to envision new male images and gender roles which can help to maintain and improve reproductive health of women, children and men themselves. The expected outcomes of male involvement and their effective partnership in sexual and reproductive health can be grouped into six categories: social benefits; benefits to the community; couples; women; men and children.

Reproductive health programs have traditionally focused on women. However, there is an increasing recognition of men's influence in reproductive health. Men play key roles in supporting women's health, preventing unwanted pregnancies, reducing the transmission of sexually transmitted infections, making pregnancy and delivery safer, and reducing gender-based violence. Further men themselves need clinical services and information on reproductive health, a need that has to be addressed within the limited resources.

When reproductive health programs exclude men, they undermine their own effectiveness. Men's reproductive health directly affects that of their partners. Treating sexually transmitted infections (STIs) in women makes little sense when male partners who got them infected are not involved in treatment and preventive education. Men can make motherhood safer by supporting the need for prenatal care, rest, improved nutrition during pregnancy, and being actively involved in pregnancy & delivery. Men's support for limiting family size often makes it possible for women to use contraception. Men getting them investigated for infertility often save the women from unnecessary investigations and treatment.

It is being recognized that men can play an important role in bringing about social change since, in most societies men dominate in nearly every aspect of life. Men and women normally do not talk about sexuality and reproductive health and their joint responsibilities. This communication is necessary for men and women to become equal and responsible partners in RH.

Social benefits:

These refer to reduction of harmful practices and gender-based violence that affect women and powerless adolescents. These also refer to reduction in HIV & AIDS pandemic by reducing male sexual partner's risks for HIV infection. These include promotion of reproductive health rights, which are respected when everyone is empowered to make safe and informed decisions on sexuality and reproduction. Thus, the probability of achieving equitable relations between men and women can be reached.

Community benefits:

These include fewer adolescent pregnancies; sexually transmitted infections, including HIV; unsafe abortions, these also refer to better community organization for maternal health and survival, domestic violence and adolescent needs for information, education, and services.

Benefits to couples:

Men and women are partners in marriage and sexual relationship; therefore, it is logical that they share a satisfying sexual life, and responsibility of preventing disease and health complications. Couples benefit by an increase in the possibility to negotiate sexual safety; joint decision making in sexuality and FP procreation and parenthood; and more intimate and satisfying sexual relationships. Men's involvement in decisions affecting the choice and use of a contraceptive method is important because preventing unwanted unplanned pregnancy becomes a shared responsibility of the couple.

Benefits to women:

Include increased sense of entitlement and empowerment in reproductive health and rights,

consensual and more pleasurable sexual relations; less burden for contraception, pregnancy, child rearing, domestic chores and violence fewer risks of sexually transmitted infections. Men can understand the need for and support to their spouses during the entire maternity cycle(s) and during menopause. Men's involvement in decisions regarding the number of children to have is important because both parents are responsible for their children's upbringing.

Benefits to men:

These include an increased sense of comfort with their identity; men can understand their sexual and reproductive health needs. Increased skills to negotiate rather than impose decisions on women regarding sexuality, contraception, procreation and child rearing. Increased contraceptive use and higher rates of diagnosis and treatment of sexually transmitted infections, cancers, infertility, sexual dysfunctions and other psycho-sexual problems. Men's involvement in reproductive decisions will help the men realize their own role and responsibility in developing a stronger bond between the couple and their children. This will contribute to family happiness.

Benefits to children:

These include offering of positive father role models, implying better care and nurturing by both parents, a more stable family structure with grooming as balanced persons and reduction of sexual abuse and domestic violence

Involving Fathers in Prenatal Care

Prenatal care visits are a key point within the RMNCH continuum where fathers can learn about nutrition in pregnancy, recognition of pregnancy complications, breastfeeding, postpartum family planning and the negative consequences of STIs during pregnancy (to name a few).

Several observational studies have shown that educating men about the importance of family health care enhances communication between men and their female partners about topics such as the health of pregnant mothers and child immunizations

9.2 ROLE OF GENDER IN MALE INVOLVEMENT

9.2 ROLE OF GENDER IN MALE INVOLVEMENT

Gender refers to the social attributes and opportunities associated with being male or female. Gender can also relate to expectations that exist about what it means to “be a man” and what it means to “be a woman”—what is expected or is deemed normal and appropriate based on being these gender identities. These gender norms influence and shape people’s behavior, attitudes, the actions we take, and the decisions we make – both in general and in relation to our SRH. Challenging existing gender norms and inequalities means confronting the attitudes, behaviors, and power structures that uphold them.

Men’s sexual and reproductive health needs differ across life stages depending on whether they are adolescents, beginning to explore sexual relationships, sexually active, newly married, first-time parents, growing or spacing their families, or have completed family size. Throughout these life stages, men strive to fulfill roles and expectations while exhibiting behaviors that can facilitate or inhibit healthy sexual relationships.

Common behavioral aims of male engagement programming include increased male participation as:

- Contraceptive users (e.g., condoms and vasectomy) or as partners using methods requiring active cooperation (e.g., Standard Days Method)
- Partners engaged in open communication and decision-making about family planning and contraceptives
- Advocates for gender equality and family planning in their families and communities

Assess men’s and boys’ knowledge and attitudes related to reproduction and contraception.

Family planning programs typically target information and messaging to women and girls; however, women and girls may not be the primary decision-makers about their own contraceptive use. Providing correct and comprehensive information facilitates active engagement of men as supportive partners, advocates, and users of contraception. Misinformation and negative attitudes or beliefs such as using contraception makes men less “manly” or using contraception causes infertility can create barriers to contraceptive access and use. These beliefs could reduce men’s use of condoms or vasectomy and support for other contraceptives.

Important areas to consider for assessments of knowledge and attitudes include:

1) Knowledge of puberty and reproduction across the life cycle, for example:
    - Boys’ knowledge of physical, social, and emotional changes during puberty
    - Young men’s knowledge of reproduction, women’s menstruation, and related issues
    - Knowledge of the fertile period
2) Knowledge, beliefs, and attitudes toward family planning and contraceptive methods, particularly as they relate to sexual functioning and gendered social roles, for example:

- Knowledge of individual methods, how they work, and their side effects
- Ideal family size
- Beliefs about how contraception affects health, work, and future fertility

3) Knowledge of, preferences for, and perceptions of family planning services, for example:
   - Men's and boys' knowledge of family planning service availability
   - Men's and boys' preferred characteristics for contraceptive services, service providers, and health facilities

Gender norms—rules or expectations that shape and regulate appropriate behavior for males and females—influence sexual and reproductive health. As adults, men often have more say than women do in family decisions, such as when to begin a family and how many children to have. This imbalance results in inequitable couple communication about fertility intentions and contraception. Gender norms that idealize sexual ignorance for girls and sexual prowess for boys exist in many countries.

Men play an important role in challenging inequitable gender norms and fostering positive norms, particularly among their peers and with their children.[11-13] Failure to address issues such as women's subservient social status, economic dependence on men and limited agency, household power dynamics, and harmful masculine norms are common reasons that investments in family planning service delivery fail to achieve expected results.[14,15]

Before designing a programmatic response, clarify the underlying norms that influence key behaviors:

- Are women able and allowed to articulate and act on their preferences regarding sexual relationships and contraceptive use?
- Do partners discuss fertility intentions?
- Do women believe they need permission from their sexual partners, husbands or male partners, or gatekeepers to use or pay for family planning services?
- Is it considered socially "appropriate" for men and boys to support family planning? What are the social impacts for men and boys of engaging in gender equitable behaviors?
- As a key adverse factor in sexual relationships, is intimate partner violence/spousal violence common?
- What are the expectations around shared household responsibilities and caregiving for children in communities?

PURPOSE OF INVOLVING MEN IN R.H

Gender stereotypes structure the reproductive health programs in ways that prevent programs from achieving the vision of the ICPD Program of Action. Just as understanding of reproductive roles led programs to focus entirely on women, similar perceptions now limit the ways that many programs work with men. So our interventions should not reinforce

stereotyped differences between male and female sexuality and reproductive health behavior.

Goals of male involvement programs:

- Improve male and female reproductive health
- Provide support for women's actions related to reproduction and respect for women's reproductive and sexual rights;
- Encourage safer and responsible sexual and reproductive behavior in adolescents and young men (adolescents: up to 19 years old and young men up to 20-24).

Objectives:

Male involvement in reproductive health is aimed to increase men's participation and joint responsibility in all areas of sexual and reproductive health. Sensitizing men to gender issues as an essential element to ensure gender equity is very critical.

The main objectives include:

- Increasing men's knowledge of reproductive health matters including prevention of sexually transmitted diseases and HIV & AIDS.
- Increasing men's support of the reproductive health choices of their partners.
- Improve communication between spouses on sexual and reproductive health issues.
- Increasing men's access to reproductive health information and services and therefore increasing contraceptive use as well as the number of men reporting to health facilities for treatment of sexually transmitted infections.
- Decreasing the number of unwanted pregnancies, unsafe abortions, and STIs.
- Raise gender sensitivity by addressing gender roles and their effects in shaping relations between partners.
- Decrease gender violence in all its forms.

Improving skills of health professionals by training them in male reproductive health issues.

9.3 MEN'S ROLE AND RESPONSIBILITIES AS FATHERS AND HUSBANDS

9.3 MEN'S ROLE AND RESPONSIBILITIES AS FATHERS AND HUSBANDS

Responsibilities of a Father:

Women's lives are usually described in terms of motherhood, while men's lives are usually characterized as head of household or wage-earners. Men's role as fathers tends to be vague. Yet, men's commitment to their children is the key to the quality of family life and the prospects of the next generation. The duties of a father both actual and expected are diverse. Father's contribution to the direct care of their children, particularly when children are very young, is critical.

Economic, cultural and other factors influence the amount of time fathers spend with their children. Cultural factors are perhaps of paramount importance. In many communities, father's limited participation in child care is linked very strongly to beliefs that close father child relations are not appropriate, particularly in girl child. Available evidence suggests that the more men and women cooperate economically, the more equally they tend to divide child care responsibilities.

Economic support from fathers also declines when marriages fail. Whether or not the father lives with his children, the quality of his relationship with their mother is very important. Contact between fathers and children tends to diminish, or even disappears, soon after a break-up when mothers have custody. Vital importance should however be given to father-children association and interaction in a harmonious family unit. Fathers should spend more time with children and contribute in childcare. Children, parents and society benefits from men's active involvement with their children; there are social benefits because when fathers are actively involved, children's emotional and social well-being and self-esteem are enhanced, and the likelihood of behavioral problems are less.

Men's roles in families, however, are not improved automatically by their presence, nor do children necessarily benefit. Problems may arise if the father is at home, but decision making is not shared by both parents, as is often the case. Child welfare suffers when men unleash violence against women and children, or when men spend income on goods that do not contribute to family welfare. It poses a great challenge to traditional notions of fatherhood, held by both men and women in the society.

The Ideal Father:

The qualities of a man as an ideal father are as under:

- Is present at the birth of his child
- Has close association with his children
- Cares for their upbringing, health & welfare
- Participates in their educational and recreational activities
- Cooperates with his spouse in taking care of children.
- Shares in household tasks; and

- Is a role model of an ideal husbands

Old Paradigm: Masculinity	New Paradigm: Fatherhood
Primary and sole financial provider	Shares financial responsibilities with spouse
Authoritarian	Supportive and understanding of his children's
	health, emotional, and educational needs.
Unemotional/self-centered	Emotional / caring
Distant	Present
Restrained	Involved in all aspects of child nurturing

This new paradigm of fatherhood may be compared with the old concept of masculinity as follows:

Man's role & responsibilities as a husband:

- Care for his wife's health even when she is not pregnant.
- Share household responsibilities with her.
- Encourage inter-spousal communication for solving problems.
- Refrain from gender violence
- Exhibit responsible sexual behavior and adopt preventive measures for sexually transmitted infections.
- Ensure appropriate financial support to family.
- Encourage shared control to family income regarding children's education, nutrition and family health.
- Make mutually agreed (with spouse) decisions regarding F.P & R.H, e.g., number of children & when to have them (spacing)
- Ensure reproductive health & well-being of wife.
- Adopt male methods of contraception if required.
- Contribute to prevention of unwanted and high-risk pregnancies.
- Facilitate ante-natal, natal and postnatal care of wife.
- Provide emotional support in the childbearing process.
- Help in child rearing and child health activities.

- Be prepared to meet any emergency of his wife in obstetrics and make timely decisions to ensure safety of mother and her baby.
- Co-ordinate with community members for providing transport for emergency obstetric care.
- In case of sub-fertility share the responsibility of undergoing investigations, render financial and moral support as well.

Role of men in family planning

- Promote small family norms.
- Advocate family planning practices.
- Support family planning activities in the community.
- Disseminate information about family planning methods.
- Use contraceptives by themselves.
- Encourage contraceptive practices by their spouses.
- Practice and promote safe sexual behavior for prevention of STIs, HIV & AIDS.

If men's roles in sexual and reproductive health are recognized, understood and well addressed, men will be enabled to make informed choices that have the potential to have positive implications beyond reproductive health.

Pakistani society is generally a male-dominated and many women especially of rural areas are generally dependent on the decisions of their husbands in almost all aspects of life. Men play powerful or even dominant roles in making reproductive health decisions. Men everywhere exert a strong influence over their partners, determining the time and conditions of sexual relations, family size and access to healthcare. The gender inequities influencing access to health care pose a challenge to reproductive health services to overcome such injustice.

9.4 BARRIERS TO MALE INVOLVEMENT

9.4 BARRIERS TO MALE INVOLVEMENT IN RH

Social, economic, and cultural challenges pose barriers to involving men in RH matters. Policies and programs to promote men's involvement in fathering are also inadequate. Barriers include the following:

Addressing men as a target group:

It is often considered that men are beneficiaries of their programs because men are simply eligible for the services available. However, men were not specifically targeted in these programs, as the focus was on specific target groups selected on the basis of their occupation (e.g., soldiers, police officers, construction, and garment factory workers) and the perceived risks associated with the various occupations. Focusing on specific target groups tends to overlook married men who are jobless or have a non-corporate job and have stable family lives but who also occasionally exhibit high-risk sexual behavior and, as a consequence, put themselves and their wives at risk for STIs and unwanted pregnancy. Targeting the general male population as husbands and individuals in need of improved and expanded health services is not yet a RH priority.

Addressing the perception of male and female roles in society:

Society's expectations for male and female sexual roles are markedly different. Men's needs for sexual variety and quantity are perceived as a priority while women are expected to be monogamous and uninformed. Traditionally, women look after the household; they are responsible for domestic labor and care of the family.

Women centered environment of RH services:

The current reproductive health services have a predominance of female clients and service providers. It is undeniable that, in a country whose maternal and infant mortality rates are high, women are in urgent need of specific services. Services have been expanded to promote safe deliveries, ante- and postnatal care, safe motherhood, contraceptive availability, maternal and child nutrition, and immunization. Moreover, reproductive health is confined to family planning only and priority given to provide maternal and childcare services at family welfare centers, resulting in provider's bias against male involvement and thus men are left out of reproductive health issues.

The cultural traditions of seeking health care:

The challenge of involving men in RH interventions is not simply a matter of overcoming feelings of shame and embarrassment but must also address the cultural traditions associated with seeking healthcare. First, men are less likely than women to seek treatment, testing, or counselling for STIs by a trained health provider or to obtain such services, if requested to do so by their wives. Secondly men are more likely to seek the services of private rather than public health outlets, including traditional healers. This is because they don't know where to go for their problems.

Limited access to formal health services:

Financial constraints, loss of income through lost work time, or the inability to arrange

transport are all factors that prevent men from either accompanying their wives to RH appointments or keeping their own RH appointments. For example, vasectomies and female sterilization require two round trips to the provincial district hospital (for many it is an expensive journey) for two people; the procedures require the written consent of partners.

Stereotypical male image:

Male image is that of the dominating partner, influencing sexual practices but discerned from childbearing and child rearing. They are thought to be rigid and unable to change because change is not in their interest. Men are considered to be superior and women as obedient, so there is little communication on reproductive health matters between them. Role models for men as fathers and instruction in childcare skills are lacking.

Men's sexuality is more important than women's:

The basic acceptance of the sexual double standard for women and men has made reproductive health interventions for men less ambitious, and has focused attention on male sexuality in ways that have never been true of programs for women. If women are to generate the confidence to negotiate the use of condoms, then the dominant cultural stereotypes of women as sexually passive partner must be countered.

Regulation and control of fertility as the domain of women:

Women only are considered to be responsible for regulation and control of fertility, and thus the Health Care programs are not geared to meet men's needs. There are limited contraceptive options for men. Lack of information and knowledge of the providers/client: Men are hesitant to ask questions regarding reproductive health, and it is confounded by the few opportunities to do so. Most men have a lot to learn to become responsible sex partners. Most need to know more about preventing

pregnancy and avoiding / preventing HIV & AIDS and other STIs. Whereas the information available as IEC material is mostly for women; very little male specific material has been produced.

EFFECTIVE PLANNING AND PROGRAMMING:

For a program to be effective in changing men's behaviour and gender-related attitudes the following features are important:

1) Group education, including discussion sessions, didactic lessons, and participatory methods (e.g., role-plays).
2) Community outreach, mobilization, and mass-media campaigns, including radio and television messages, billboards, widespread educational materials, and public events.
3) Clinic-based interventions, including introduction or scale up of male reproductive health services, individual or couples counselling, and provide education about men's and women's reproductive needs.

Although stand-alone activities may be effective, the WHO review found that those programs

that implemented two or more activities across the categories above were more likely to be effective. This was likely due to an additive effect of working at multiple levels (individual, household, community, etc.) by considering relationships, social institutions, gatekeepers, community leaders, and the like.

RUMORS AND MISCONCEPTIONS ABOUT RH SERVICES AND PRACTICES:

Rumors and misconceptions pose a great barrier to male involvement in reproductive health. Common myths regarding men and reproductive health:

Men are opposed to family planning and want more children than their partners:

Evidence has shown that men's opposition to family planning and desire for a larger number of children is not as widespread as previously supposed.

Men always want sex, initiate sex and orchestrate sex:

Male desire is supposed to be separated from affection. They are not expected to be faithful and to show emotions, fear, and insecurity without their virility being questioned. They are expected to be strong and take risks.

Men tend to engage in deviant behavior:

They are many tunes portrayed in negative stereotypes as violators, insensitive to women's concerns, uncaring and abusers of women's rights.

Men will talk only to male service providers:

Male RH programs with female staff, including for the practice of vasectomy have shown as good results as those with male staff. The essential is not the sex of the provider but the respect and confidentiality with which men are treated.

Serving men is expensive:

There are a number of examples of good quality care with limited resources, especially when existing services are rationalized.

All men have the same needs and concerns:

Specific strategies are needed to service the specific needs of different men, young, older, rural, urban, educated, uneducated. Not every action taken for men's health caters to each group.

Limited inter-spousal communication about family planning and reproductive health needs:

Men play powerful-even dominant roles in reproductive health decisions, without considering their partners wishes or the health consequences for themselves or their partners. However, their actions can have unhealthy and even dangerous results. In contrast, couples who talk to each other about family planning and reproductive health reach beneficial decisions. For

example, they are more likely to use contraception effectively.

REASONS FOR LACK OF MALE INVOLVEMENT:

The different reasons for lack of male involvement in our country are:

- Men do not get pregnant and hence do not suffer from risks of pregnancy and childbirth. Therefore, regulation and control of fertility is considered the women's domain.
- Cultural and social factors determine the male image and influence sexual practices and male participation in child bearing and child rearing.
- Men are considered the superior partner in the marital relationship; women are expected to be obey.
- Reproductive health was limited to family planning in the past. Family planning programs concentrated on fertility regulation mainly through women.
- The programs never really encouraged male involvement. IEC material available is mostly for women and very little male focused material has been produced.
- Men are generally hesitant to ask questions about RH and are provided few opportunities to do so.
- Reproductive health centers are female oriented.
- Men are not as familiar with the health care system as women.
- Negative attitude of service providers towards male involvement.
- Negative attitude of men towards their involvement in RH

Lack of awareness and training of men reproductive health issues

9.5 COMMUNICATION IN MALE INVOLVEMENT

9.5 COMMUNICATION IN MALE INVOLVEMENT

Prioritizing male involvement at the program planning and implementation level is crucial

Couple / Inter-Spousal Communication

Communication between couples enables husbands and wives to know each other's attitudes toward family planning and contraceptive use. It allows them to voice their concerns about reproductive health issues, such as worries about undesired pregnancies or STIs. Communication also can encourage shared decision-making and more equitable gender roles. Couple or spousal communication can be a crucial step toward increasing men's participation in reproductive health. Since both men and women play key roles in reproductive health communication it is therefore necessary to making responsible and healthy decisions.

Inter spousal communication and decision-making:

Men are more interested in family planning than is usually assumed. Today, family planning programs increasingly are focusing on involving men. Yet much remains to be done to turn interest into healthy behavior.

Communication enables husbands and wives to know each other’s attitude towards reproductive health related decisions such as how many children to have and at what interval and which contraceptive to use. It allows them to share their concerns about infertility, unwanted pregnancies and sexually transmitted diseases etc. It encourages shared decision making and more equitable gender roles.

Obstacles to Couple Communication:

In many societies sex is a taboo subject for men and women to discuss; they are also afraid of rejection by a sex partner especially at the beginning of a relationship. Consequently, they may not bring up uncomfortable issues such as sexual history, or the ideal number of children or spacing they want to have.

As with decision-making, women’s lower status and lack of power limit couple communication and even when reproductive health issues are discussed between them, it is usually not on equal terms.

Interpersonal Communication:

Interpersonal communication, including counselling, is critical to the adoption and sustained practice of new behaviors. Face-to-face communication allows individuals to express their doubts and fears, receive feedback and reassurance and obtain vital information. Because sexuality and reproduction involve intensive personal behaviors therefore personal contact can help to address men’s individual concerns and provide a supportive environment. The major ways in which program can use interpersonal communication to influence male reproductive health include the following:

Social Networks*:*

Personal contacts, including friends, relatives, co-workers and neighbors, can introduce new

ideas and provide support for behavior changes. These networks may be especially important to men because they have less contact with health workers.

Counselling:

One-on-one contact with a health worker, peer educator or other knowledgeable person can help individuals to clarify their views and make appropriate choices regarding reproductive behaviors. Counselling can be especially helpful to men because of their concern for privacy and their disinclination to seek medical assistance for problems with their reproductive organs. Counselling can also benefit couples by ensuring that they receive the same information, reach a joint decision and can implement their decision.

Telephone Hotlines:

In urban areas, telephone hotlines offer a means of private, confidential counselling and appear well suited for those who may not wish to discuss their anxieties face-to-face.

Advocacy in Male Involvement*:*

Advocacy is necessary to reach policy makers and decision-makers, as well as program managers, in order to convince them that program activities and resources need to be focused on promoting and facilitating male involvement in reproductive health. Information, education and communication (IEC) efforts will focus on promoting active involvement of the men themselves in reproductive health issues throughout their life cycles. These strategies will need to be tailored to the socio-cultural aspects of each target audience.

ENGAGING MEN IN FP

Engaging men in family planning programs holds promise as a means to improve access and use of family planning. Addressing gender in family planning programs by engaging men can improve program outcomes and increase gender equality. However, many cultural factors in Pakistan impede men's engagement in family planning.

Increasing men's engagement in family planning entails changing deeply entrenched gender norms and is thus a complex process requiring a long-term commitment. Gender norm also influence men's acceptance of family planning in general and of specific contraceptive options. Male methods, in particular, are surrounded by myths and misperceptions.

WAYS TO IMPROVE MALE INVOLVEMENT IN REPRODUCTIVE HEALTH:

Male involvement in reproductive health may be enhanced by adopting the 'client' and 'program' oriented strategies, education and service improvement, and creating an enabling environment. Out of these the client-oriented strategies are of importance to the FWW and will be discussed here. Even though there has been some success in trying to increase male involvement of reproductive health services, the reality remains that most males do not utilize these services.

The factors which positively influence male involvement include:

- Health care providers can change behavior through counselling and education

- Changing men's attitudes regarding contraceptive responsibility
- Increase awareness about STIs, HIV & AIDS
- Better access to primary health care services.
- Community outreach
- Engaging men as main stakeholders in reproductive health matters
- Encourage to involve men in discussions
- Allowing men to participate in family planning counselling sessions with their partners.
- Encouraging female clients to discuss family planning and reproductive health with their spouses.
- Discussing male methods of contraception with men.
- Encouraging male and female patients to bring their partners for STI testing and treatment.
- With their spouse's permission, allowing men to observe their spouse's reproductive health visits and procedures to generate awareness and encourage support.
- Encouraging men to be supportive of prenatal, natal and post-natal care and safe motherhood.
- Encouraging male community and religious leaders to promote the men's services offered at a facility.
- Promoting men's services at community education workshops.
- Forming partnerships with other male oriented community groups.
- Displaying male related posters on clinic walls.
- Putting male-oriented magazines in the waiting rooms.

Engaging Men as Partners in Reproductive Health is important

Involving men in prevention of mother to child transmission (PMTCT) of HIV

Recent studies in Africa reinforce that establishing consistent participation of male partners (in this case husbands) for PMTCT activities is a determinant for successful implementation of PMTCT guidelines. Specifically:

- Women with supportive partners will be more motivated to undergo HIV testing, to return for test results and to disclose the HIV result to their partner.
- Couples well informed about HIV prevention and PMTCT may be more likely to adopt low risk behaviours and increase mutual support, regardless of the test result.

Studies also show that low male participation in PMTCT services increases the risk of maternal transmission of HIV to exposed infants. Further, women whose male partners came to antenatal clinic visits had less MTCT compared with women with uninvolved partners. In short, male involvement in PMTCT improves ARV prophylaxis uptake, and is a key factor in

PMTCT of HIV.

The Role of FWWs:

Harsh behaviour of the service providers:

Harsh, critical behaviour and language from skilled health professionals is a barrier to male participation and discourages men from returning or participating in RH activities.

Quality of care:

Health services providers are often overworked, stressed, and have to work in an infrastructure with severely limited resources. In such context, the quality of services is compromised and taking care of participating male partners is considered an additional burden.

Another limitation for the FWW to create a conducive environment for male clients is the restricted space. Compliance of the quality-of-care standards and protocols needs to be applied across all tiers of service provision, irrespective of the gender of the health care seekers.

Lack of space/resources:

Clinics are often unable to concurrently accommodate pregnant women and their partners because of a lack of space. When there is limited physical space to accommodate the husband, they are not comfortable, and this can add to the burden and stress of the providers.

9.6 MEN AS AGENTS OF CHANGE IN RMNCH

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Male Health Workers for Accessible Care

Community-based workers are mostly women and often have difficulty in communicating with men about reproductive and sexual health issues. Social norms limit their ability to talk with men on these matters. However, as heads of households, men often decide if a mother or child can seek health care but have limited knowledge about the importance of maternal and child health services. To address these gaps, a pilot program utilizing a cadre of Male mobilisers has been established to target men more effectively and increase coverage to areas that can be difficult for women to access.

A key hypothesis driving the pilot is that increased contact between male mobilisers and appropriately informed male household decision makers will

increase access to and demand for key MNCH clinical services.

MEN AS SUPPORT FOR WOMEN SUFFERING WITH MENTAL HEALTH ISSUES

According to WHO, maternal mental health problems can have negative effects on both maternal and child health. Depression and anxiety are approximately twice as common globally in women as in men and are at their highest rates in the lifecycle during the childbearing years, from puberty to menopause. Ideally a woman should be able to turn to her husband for support. Moreover, a strong correlation is reported between perceived support by the baby's father and lower rates of depression in a sample of young and highly disadvantaged mothers.

The universal nature of maternal mental health challenges lends itself to a reasonable expectation that men can play an important role in managing maternal mental health within various social contexts internationally.

IMPORTANCE OF MULTISECTORAL AND INTEGRATED PROGRAMS

A landmark WHO 2007 report, Engaging Men and Boys in Changing Gender-Based Inequity in Health found that there has been a general move from single-focus or single-issue interventions and that multi-theme programs seem to show the highest rates and levels of effectiveness. Further, the evidence reviewed suggests that integrated programs particularly those that combine community outreach, mobilization and mass-media campaigns with group education, are the most effective in changing behaviour.

WHO is working with several partnerships including the '*MenEngage' Alliance* and the Men Care campaign to enhance their efforts to engage men as caregiver partners, promote the exchange of lessons learned, and develop evidence-based policies and program interventions.

These partnerships seek to develop a unified voice through:

- Long-term investment in reaching boys and young men in their formative years
- Policy initiatives in which gender equality is established as a new social norm

- Ensuring that new program and finance initiatives recognize the importance of routinely involving men in RMNCH.

9.7 COMMUNITY PARTICIPATION & MOBILIZATION IN MALE INVOLVEMENT

9.7 COMMUNITY PARTICIPATION & MOBILIZATION IN MALE INVOLVEMENT

Male-involvement activities should promote increased community involvement in modifying and sustaining behaviors that improve family and sexual health. Existing community networks, facilities, and agencies should be used whenever possible. Community involvement in reproductive health program can increase their acceptability, improve participation rates and promote self-sufficiency. Male Involvement can take various forms including:

1) The participation of community leaders and members in project design and implementation
2) Service delivery and education activities led by community groups conducted by volunteers
3) Community control over program activities and contributions of volunteer time, money, clinic facilities, supplies and other resources.
4) Giving local communities major responsibility for health programs creates a sense of ownership and ensures that community needs are addressed.

Key steps in mobilizing a community are to:

1) Identify a local group to lead the effort,
2) Conduct a community network diagnosis,
3) Strengthen community networks, and
4) Help community members to develop educational programs for the networks.

Possible coordinating groups include local non-governmental organizations (NGOs), cooperatives, unions, professional and civic organizations and women's groups. The community network diagnosis is used to identify groups of people, who interact with each other regularly. Once these clusters of people have been identified, educational programs can be used to disseminate information and refute rumors. This technique has been shown to be effective in conveying the information and skills needed to change high-risk behaviors.

Groups within the community can play a major role in conducting service delivery and education programs. Such groups can be part of the formal leadership structure, or a separate entity formed to meet the needs and interests of its members. Several approaches include:

- Group Meetings: Group meetings can be a relatively efficient way to convey information, address individual concerns and create a basis for mutual support for behavior change.
- Live Entertainment: Live performances including music, theatre, comedy routines, dances and puppet shows are popular and can be effective in conveying key messages.
- Promotional Events: Health agencies can organize special displays for sports events, fairs, markets and other places where large number of men congregates. These

contacts can publicize products and service sites and encourage men to seek help when needed. Gifts and other promotional materials draw crowds and media attention.

9.8 MEN'S REPRODUCTIVE HEALTH NEEDS AS CLIENTS

9.8 MEN'S REPRODUCTIVE HEALTH NEEDS AS CLIENTS

Although there is no consensus on the extent to which health facilities can satisfy the unmet sexual and reproductive health needs of men, there is general agreement that men's reproductive health needs are not being met. These include family planning; prevention and treatment of sexually transmitted infections; sexuality and sexual dysfunctions; psycho-sexual problems; infertility; prostatic and testicular cancers and urologic conditions.

Other RH concerns of men include size of penis, impotence, early ejaculation, masturbation, and STIs & AIDS. Despite men's interest but lack of knowledge in sex and reproduction, and their sexual dysfunctions has been ignored in health care settings. Men also want to know about the fertile time in a woman's menstrual cycle. Men know little about their own or about women's sexuality and communicate little about their sexual relations, and often believe in sexual myths.

Men require sexual and reproductive health services that are flexible and respond to their sexual behaviors and changing needs throughout their lives. However, the services provided are insufficient or even nonexistent.

PROGRAMMATIC ASPECTS OF MALE INVOLVEMENT IN RH

Pakistan has a high unmet need for family planning services i.e., 33%. One of the reasons identified for this high unmet need was the low status of females with consequent low mobility. In Pakistan, women are usually dependent upon male relatives for accessing all kinds of health care. In this context gender roles have a key influence on reproductive health. It is assumed that men can advance gender equality and improve their family welfare by:

- Promoting their partner's reproductive health and well-being by accepting it as a right of his family
- Encouraging inter-spousal communication for working together to solve problems
- Adopting male methods of contraception, lending support and utilizing resources for availing the services
- Addressing the concerns and needs of their own reproductive health by acquiring knowledge and adopting preventive measures
- Refraining from gender violence and advocating the same to their peer group
- Practicing responsibilities of a good father and husband, supporting spouses in child rearing and household tasks, protecting children's health and investing in their future by devoting time and resources.
- Educating their sons to respect women's needs and perspectives,
- Developing a supportive relationship with daughters.
- Addressing reproductive health issues of the adolescent age by providing children with sensitive / relevant information.

PROGRAMMATIC INTERVENTIONS

The steps for programmatic interventions for male involvement are as under:

Collect and assess baseline information:

It is important to begin any advocacy and information, education and communication (IEC) initiative with a participatory approach to collecting and assessing baseline information about the current situation (socio-cultural, political and health) related to gender roles and responsibilities, as well as their impact on the reproductive health situation of both men and women in the population. Also, it is important to identify the means through which information and ideas are transmitted to the population to see who are the true community leaders and power brokers that affect public opinion.

Integrate in routine life activities:

It is possible to integrate skills and approaches into activities and services of different agencies that can complement or support one another. For example, counselling is important for helping men and women to better understand how strengthening male involvement in reproductive health can be of benefit to both of them and their families. Counselling can be incorporated into school activities, youth centre activities, as well as in places where young men tend to gather in the community. Interactive and participatory educational approaches can be incorporated into already planned activities, including small group presentations, role plays and simulation games.

Identify and promote convincing arguments:

Both individuals and groups of people with common interests will be more inclined to try out behaviors that are not the ones traditionally linked with their gender if they are convinced that such behavior will be of benefit to them and their families socially, economically and educationally. Change can only come from within the group, and it usually knows best what is feasible and likely to work. Thus, a key goal is to help the group come up with its own ideas for solutions.

Sensitize media specialists and orchestrate mass media collaboration:

Media professionals are looking for information and stories that will be exciting, newsworthy and that will capture the attention and interest of the population. They need to be sensitized that male involvement has great importance for both men's and women's reproductive health and they need to be continually provided with new information that is expressed in a catchy way so that they themselves will be motivated to promote the topic. Since the mass media is an ongoing means of sending messages and influencing public opinion, time and effort invested in cultivating the collaboration of media specialists can have a big payoff. The mass media campaigns are an important component of male involvement programs for four reasons:

Reach:

Radio and television broadcasts reach millions of men, and access to these media is growing rapidly. For example, a 13-episode television drama promoting birth spacing, spousal communication and male involvement reached four in five households in three major cities with an audience of some 20 million people. Newspapers, magazines, billboards and other channels can bring information to large numbers of men.

Influence:

Mass-media channels have high credibility and often promulgate new ideas and trends. They can influence individuals to adopt new behaviors and can change public perceptions of what constitutes normative behavior

Cost:

The cost per person reached through the mass media is usually lower than that of interpersonal channels.

Impact:

Although interpersonal channels, such as clinic education and outreach workers may be more effective in changing health behaviors per person reached the mass media can have a larger impact on behavior because of the larger number of people they reach. Ideally, male involvement programs should include a combination of interpersonal community based and mass-media approaches.

Mobilize other means of communication:

Traditional means of communication such as drama, folklore, songs, and dances, utilizing local markets, fairs and festivals, as well as mass communication such as television, radio, newspapers and magazines are all very effective in disseminating information and promoting new ways of looking at gender roles and responsibilities.

Other helpful approaches include: using personal stories to illustrate why the issue of gender is important and how others have developed more equitable and healthier relationships; ensuring that where appropriate there are facts to substantiate the messages; and utilizing quotes and statements from people that are well known and respected.

Start where there is the best chance of success:

Changing behaviors related to gender roles and responsibilities may be a lengthy process. Resistance to change is firmly entrenched and a single exposure to an idea is not sufficient to result in such change. Accordingly, when promoting gender role behavior change, it will be important to seek out those individuals who might be more receptive to change or to trying something new, for these are the ones who will be most likely to take the risk of going against the tide of what the others do. Also, it is important to enlist support from those that are known and admired by the target audience.

The role of male personnel is different in each province

Personnel Involved in Programmatic Interventions:

The cadres, who are assigned to enhance male involvement in reproductive health issues are discussed here briefly:

District Population Welfare Officer:

The District Population Welfare Office (DPWO) serves as the main operating unit for

executing population welfare services in the respective district. The District Population Welfare Officer plans, organizes, implements, supervises and coordinates the work of different service providers that include FWWs, FWAs, Male Mobilizers (male motivators are already functional in Punjab).

Tehsil Population Welfare Officer:

The TPWO deploys and supervises the work of male Family Welfare Assistants in interpersonal motivation, distribution of contraceptives and information, education and communication material. The TPWO is also responsible for supervision and he visits each motivator (FWA male) at least once after two months at the contact point. Monthly meetings are held at the TPWO office as the contact point for supply of contraceptives, submission of report and to discuss problems faced in the community.

Male Mobilizers:

The responsibilities and functions of these workers are as follow:

- Provide information and education on reproductive health with special emphasis on family planning and inform the community about the provision of services and locations of the service network of the population welfare program, line departments, civil society and private sector including general practitioners, hakims and homoeopaths.
- Popularize the small family norms in the area of assignment, paying specific attention to newlywed couples and low parity families through Baseline information.
- Counsel / motivate for all family planning methods with emphasis on male methods.

Family Welfare Assistant (Male):

The responsibilities and functions of these workers in the following areas are: -

Family Planning:

- Explains the concept of family planning to formal and informal male groups in the area.
- Motivates high parity couples for contraceptive surgery.
- Counsel newlywed couples on small family norms.
- Gives special focus to low parity couples for spacing.

Child Care

- Holds discussions concerning responsible fatherhood.
- Holds discussions with formal and informal community groups on responsible parenthood especially fatherhood.

Health Education

- Holds discussions in men's groups on selected list of topics with particular reference to environmental sanitation and personal hygiene

- Holds discussion with individuals during home visits on selected topics of health education especially preventive health measures

SECTION TEN

GENDER

10.1 SEX & GENDER

10.1 SEX & GENDER:

Sex refers to the biological differences between men and women. These are generally universal and unchanging. For example, only women can give birth and only men grow a beard

- Sex is being male or female.
- Sex describes those characteristics of men and women that are biologically determined.

The sex that children are born with influences their chances in life, along with a number of other important variables such as socio-economic class or caste, race or ethnicity and disability.

The biological differences become important only when children reach puberty. Gender refers to the socially constructed roles and responsibilities of women and men in a given culture or location. These roles are influenced by perceptions and expectations arising from cultural, political, environmental, economic, social and religious factors, as well as from custom, law, class, ethnicity and individual or institutional biases. Gender attitudes and behaviors are learned and can be changed.

- Socio-cultural dimension of being man or woman
- Variable across age and time
- Variable across cultures

The social roles are assigned from the moment of their birth. All societies assign different roles, attributes and opportunities to girls and boys. They are socialized to perform the roles expected from women and men in their society, based on the ideas in each society how women and men should or should not behave.

DIFFERENCE BETWEEN SEX AND GENDER:

Sex is the biological difference between males and females. Gender refers to the economic, social and cultural attributes and opportunities associated with being male or female in a particular social setting at a particular point in time.

Gender refers to how a person's biological sex is culturally valued and interpreted into locally accepted ideas of what it is to be female or male). Gender therefore describes all the socially given attributes, roles, activities, and responsibilities connected to being male or female in a given society. In most societies, these gendered social norms divest greater privileges (often power and resources) to men and boys over women and girls.

SEX	GENDER
Biologically determined	Socially constructed / Assigned by the society
Controlled by chromosomes (XX and XY)	Controlled by socio-cultural environment.

Refers only to being male or female	Refers to behavior, the work, job & Responsibilities
Is permanent not affected by time and place	Can change. Is affected by time & place many other factors

Gendered social norms are dynamic, changing over time, and varying across cultures. Gender differences in access to information and resources (both social and financial) can impact on nutrition, education, employment, and income. These are all important determinants of good health. There is therefore a need to better understand how gender shapes vulnerability to ill-health and health sector responses so that health services can address the needs of women, men, girls, and boys more equitably (i.e., through channelling resources where they are most needed). Gender equity denotes equivalence in life outcomes for women and men, recognising their different needs and interests, and requiring a redistribution of power and resources. SRH relates to the health and well-being of people in matters related to sexual relations, pregnancy, and birth. The ability of women to realise their sexual and reproductive rights is vital to achieving gender equity in health as well as the empowerment of women.

Biological dimension of being man or woman are permanent and universal:

	MALE	**FEMALE**
Sex		XX
Chromosomes	XY	
Sex hormones	Testosterone	Estrogen and progesterone
Sex gonads	Testes	Ovaries
External genitalia	Penis, Scrotum	Clitoris, Labia
Physical Features	Adam's apple, male hair	Bigger breasts, wider hips, female
	distribution, larger muscles	hair distribution, more body fats.

10.2 TERMINOLOGY USED IN SEX AND GENDER ISSUES

10.2 TERMINOLOGY USED IN SEX AND GENDER ISSUES

Gender Roles: Activities assigned to individuals on the basis of socially determined characteristics, such as stereotypes, ideologies, values, attitudes, beliefs, and practices. Gender roles are established through the influence of family, community, schools, religious institutions, culture / tradition / folklore / history, media, policies, peer groups and the workplace.

Sex Roles: The only roles related to sex are those associated with reproduction; for example, women give birth and breastfeed, and men impregnate women with sperm.

Gender Sensitization: Gender sensitization refers to the modification of behavior by raising awareness of gender equality concerns

Gender Discrimination: Gender discrimination is the unequal or unfair treatment of men or women based solely on their sex rather than on their individual skills, talents and capabilities or any distinction, exclusion or restriction made on the basis of socially constructed gender roles and norms which prevents a person from enjoying full human rights.

Gender equality means equal treatment of women and men in laws and policies, and equal access to resources and services within families, communities and society at large.

Gender equity means fairness and justice in the distribution of benefits and responsibilities between women and men. It often requires women-specific programmes and policies to end existing inequalities.

Gender Biases:

Refers to the unfair difference in the treatment of men or women because of their sex

Women's Empowerment:

Refers to processes by which women gain power to express and defend their rights and gain greater self-confidence, self-identity, self-esteem and control over their own lives and social relationships.

GENDER PERSPECTIVE

A gender perspective allows us to understand how women, in addition to their biological risk for HIV, are psychosocially at greater risk than men because of those gender constructions characteristic to many societies.

Social tolerance of male promiscuity:

The deep-seated idea that men have sexual needs by 'nature,' means that women and society in general, find it 'forgivable' for these needs to be fulfilled indiscriminately.

Women internalize from the time they are very young the idea that it is 'natural' for the man to be 'worth more' and thus women, less.

In many cultures, the qualities of the ideal woman include self-denial, passivity and

dependence. The psychological construct of feminine sexuality inhibits many women from questioning men in any area and particularly in the area of sexuality.

Lack of interpersonal communication on sexuality among partners:

Inhibition from inquiring about the sexual habits of their partners, assuming that they are faithful and unawareness about their infection puts them at risk of contracting HIV and other STIs.

Male rejection of the condom:

This rejection occurs more frequently in sexual relations of the man with his partner. In addition, the definition of masculinity is built around the idea of "taking risks" which implies that a "real man," will take a risk rather than take precautions. Also, women often reject condom use among their partners, because they associate its use with promiscuous sexual relations or prostitutes.

Female psyche based on economic and social subjugation:

Women may be aware of their vulnerability and will not risk their relationship or male economic support, nor will they face the violence and confrontation that this type of situation can cause.

Women have not been taken into account in clinical research on HIV & AIDS:

This is due to the fact that there were a much greater proportion of men than women affected in the countries that led international biomedical research.

10.3 GENDER AND DIVISION OF LABOR

10.3 GENDER AND DIVISION OF LABOR

Every society assigns different tasks to women and men. This is known as the gender division of labor. In most cultures, both women and men do productive work but women are mainly responsible for reproductive work. While women and men are both involved in community work, men tend to have the more public and high-status tasks, such as chairing boards and leading ceremonies. Because women are involved in all three categories of work, they are said to have triple roles. Reproductive work is recognized and valued, while productive work (performed primarily inside the house) is not. Women are often overburdened because they are expected to engage in productive and community work in addition to their reproductive work.

Women's Tipple Role

Productive Work:

The production of goods and services for income, trade, or subsistence; tasks that contribute economically to the household and community. It includes wage- earning, crop and livestock production, handicraft production, marketing, fishing, manufacturing and construction.

Reproductive Work:

care and maintenance of human life within the household. It includes child care, food preparation, collection of water and firewood, cleaning, washing, building and maintaining shelter and health care.

Community Work:

Maintenance and improvement of the community as a whole. This includes building schools or clinics, planning celebrations, judging disputes, making laws and advocating for community needs, such as access to water.cc

10.4 ACCESS TO AND CONTROL OVER RESOURCES

10.4 ACCESS TO AND CONTROL OVER RESOURCES

Access is the ability to use a resource.

Control is the ability to make binding decisions about the use of a resource.

The distinction between access to and control of certain resources is important because the ability to use a resource does not necessarily imply the ability to make decisions about the use of the same resource. For example, a woman may use land to grow food on. But the land may belong to her husband who decides whether to keep or sell the land.

The fact that women and men are socially assigned different roles and responsibilities and the division of labour between women and men, has direct implications for the level of access to and control over resources they have, which in turn affects their health and their ability to access health services. Examples of how access to or control over resources might have impact on health

Economic resources

A woman may have access to funds through her husband who earns a wage or sells the household's agricultural products for money but she does not have control over this resource. This means that if she wants to go to a clinic, but there are fees for services, then her husband determines her access to health care, or to transport to get there even if services are free.

A woman may have the right to live (access) in a house which belongs to her father, husband or son. However, when the man who owns the house dies, the woman does not inherit. Her right to continue living in the house depends on the man who inherits. Thus, she does not control her own security in relation to her home.

It is not only women who may have lesser control over economic resources. Age may determine when a man gains control over resources; class determines the quantity of economic resources that some men can access and control, in comparison to other men. Workers, for example, usually do not own the factories where they work, hence they have access to a means of earning income, but they do not control that means of earning income. Amongst workers, however, it is usually women who earn least income, since women's work is given less value in society than men's work.

Political / Resources

Women tend to have less access to political resources, such as the opportunity to stand for parliament. Women also have less access to control over decision-making about who goes to parliament. Most political parties are dominated by men at leadership level, thus it is men who will decide whether or not a woman can stand to be elected for parliament. This applies likewise to decision-making positions in private sector companies, in trade unions, and in most religious groups. In all cases the leadership tends to be men and it is they who control decision-making.

Control over decision-making determines priorities in any institution: those who control local government may determine whether money should be spent on outreach from health centres or on a new sports field. If there are few women in decision-making positions,

women's needs, and priorities may not be heard. However, gender is not the only determinant of which controls decision-making resources. National leadership tend to be urban so that rural people in general have less control over political decision-making, rural women even less so.

The right to make decisions within the home is also a resource. In most homes, men have control over decisions about how the household's income will be spent; and how the women and children will behave. For example, in households which have access to bed nets to protect from malaria carrying mosquitoes, men may control who uses them. Men often use them rather than pregnant women or children for whom malaria is more dangerous.

Information / education resources:

Women often have less access to information and education than men. For example, in most parts of the world boys have substantially greater access to education than girls; in countries where many men are migrant workers, they may have greater access to information from newspapers and television than women in rural areas.

Given decision-making roles within the household, it is usually not women who control decision-making about their children's access to education and whether girls will have the same educational opportunities as boys; or about what sorts of information comes into the household-whether money is spent on TV or radio or newspapers.

Decisions about which radio stations are listened to or which TV programmes are watched, are also often controlled by men, when both men and women are in the household. This may influence women's access to satisfying recreation or information such as about political processes and opportunities for participation, or skills training provided through the media. Women's lesser access to the internet, the fastest growing information resources, compounds their marginalization.

Production of information is one of the most powerful positions in society-whether it is the spokesperson for a tribal leader, or the owner of a multi-national television company. Most of these positions are held by men who may not be aware that women and men of different ages may have different health information needs.The control over media to ensure messages which promote equality between men and women, and power to reinforce existing gender norms should also be distributed equally.

Time:

Time is a resource as one can make choices about how to use it. The previous activities on the division of labour between men and women showed the unequal allocation of time spent on work (in addition to the problem that women's labour in the home is not given any monetary value). In addition, time is not elastic-there are only so many hours in a day. If all of these hours are spent on work, this means there is less time for leisure, for further education, or for community activity. Thus, women's lack of control over time further limits their options in life.

Control over time also arises in relation, for example, to access to health services. If a person has little time, they are not likely to use up time in making use of health services. Also, the opening times of a health service may determine whether a health service can meet various

group’s needs. For example, if men or women are employed in the formal workforce, and the clinic is only open during the hours at which they are at work, then they will not be able to access the clinic, unless their workplace allows them control over their time- to work flexible hours, for example, so they access a health centre.

10.5 GENDER ISSUES IN REPRODUCTIVE HEALTH

10.5 GENDER ISSUES IN REPRODUCTIVE HEALTH

Gender, for its impact on virtually every contemporary life issue, can rightly be regarded as a foremost component of reproductive health. Reproductive health basically emphasises on people and their rights to sexuality, reproduction, and family planning, and the information to actualize this right, which has been inextricably linked to development at the International Conference on Population and Development (ICPD) held in Cairo, Egypt, in 1994. Women's sexual and reproductive rights became recognised as universal human right, violations of which occur in some reproductive health areas including gender concerns. Gender inequality and inequity encompass gender-based violence as well as gender discrimination which cuts across the life cycle of the woman; attitudes, religious and cultural practices of various nations; and issues related to employment, economy, politics, and development. The redress of gender inequality is a collective responsibility of nations and supranational agencies. Nations should adopt a framework hinged on three pedestals--legal, institutional and policy, employing the three recommended approaches of equal treatment, positive action, and gender mainstreaming.

Gender is a social construct that impacts both sexes , women are however more vulnerable because of their subordinate status In most of the South Asian societies, women face discrimination because of some deeply rooted gender norms. Pakistan is one of the developing South Asian countries with wide gender inequities. Extensive gender gaps exist in education; nutrition , health care and employment.

Being signatory to international treaties such as Convention to Eliminate All Discrimination against Women, International Conference on Population and Development and Millennium Development Goals; the Pakistan government is obliged to achieve gender equality. Government's efforts to fulfil its commitments are reflected to a certain extent in its policies on Health, Population and Women's development, and programmes including Primary Health Care and Family Planning, and Maternal, New-born and Child Health. The country still, however, ranks low in gender indicators and its gender equality measurements are deteriorating.

Women are the majority of the poor due to cultural norms and values, gendered division of assets, and power dynamics between men and women. Indeed, women and girls bear an unequal burden of unpaid domestic responsibilities and are overrepresented in informal and precarious jobs. Women also possess inherent agency and knowledge that is overlooked by policymakers as they form and implement poverty reduction plans. Development interventions continue to be based on the idea that men are breadwinners and women are dependents.

WOMEN AND HEALTH

Gender refers to the characteristics of women, men, girls and boys that are socially constructed. This includes norms, behaviours and roles associated with being a woman, man, girl or boy, as well as relationships with each other. As a social construct, gender varies from society to society and can change over time.

Gender is hierarchical and produces inequalities that intersect with other social and economic inequalities. Gender-based discrimination intersects with other factors of discrimination, such

as ethnicity, socioeconomic status, disability, age, geographic location, gender identity and sexual orientation, among others. This is referred to as intersectionality.

Gender interacts with but is different from sex, which refers to the different biological and physiological characteristics of females, males and intersex persons, such as chromosomes, hormones and reproductive organs. Gender and sex are related to but different from gender identity. Gender identity refers to a person's deeply felt, internal and individual experience of gender, which may or may not correspond to the person's physiology or designated sex at birth.

Gender influences people's experience of and access to healthcare. The way that health services are organized and provided can either limit or enable a person's access to healthcare information, support and services, and the outcome of those encounters. Health services should be affordable, accessible and acceptable to all, and they should be provided with quality, equity and dignity.

Gender inequality and discrimination faced by women and girls puts their health and well-being at risk. Women and girls often face greater barriers than men and boys to accessing health information and services. These barriers include restrictions on mobility; lack of access to decision-making power; lower literacy rates; discriminatory attitudes of communities and healthcare providers; and lack of training and awareness amongst healthcare providers and health systems of the specific health needs and challenges of women and girls.

Consequently, women and girls face greater risks of unintended pregnancies, sexually transmitted infections including HIV, cervical cancer, malnutrition, lower vision, respiratory infections and elder abuse, amongst others. Women and girls also face unacceptably high levels of violence rooted in gender inequality and are at grave risk of harmful practices such as discriminating against the girl child, early and forced marriage. WHO figures show that about 1 in 3 women worldwide have experienced either physical and/or sexual intimate partner violence or non-partner sexual violence in their lifetime.

Harmful gender norms – especially those related to rigid notions of masculinity – can also affect boys and men's health and wellbeing negatively. For example, specific notions of masculinity may encourage boys and men to smoke, take sexual and other health risks, misuse alcohol and not seek help or health care. Such gender norms also contribute to boys and men perpetrating violence – as well as being subjected to violence themselves. They can also have grave implications for their mental health.

Rigid gender norms also negatively affect people with diverse gender identities, who often face violence, stigma and discrimination as a result, including in healthcare settings. Consequently, they are at higher risk of HIV and mental health problems, including suicide.

Our biology allows us to escape certain health problems. However, most health conditions affect both men and women in varying degrees and ways.

HEALTH RISKS INFLUENCED BY GENDER

Many male health risks can be traced back to behavior: In general, men engage in behaviors that lead to higher rates of injury and disease. They also tend to eat less healthful diets.

However, anatomy, hormones and genes also play roles in men's increased risk for these diseases:

Heart diseases Among men age 65 and over, more than 39% have heart disease, compared to about 27% of women in the same age group.

Why: While women's bodies tend to be pear-shaped, men’s bodies are generally apple shaped. When women gain weight, it often lands on their hips and thighs.

"Men almost always put weight on around the middle, "And this type of body fat, known as visceral, is a heart disease risk factor that many women simply don't share."Also, men don't have the protection of estrogen. Estrogen may keep women's cholesterol levels in check, reducing a key heart disease risk factor. However, once women hit menopause, their heart disease risk goes up.

Parkinson's disease This disabling neurological disease affects about 50% more men than women.
Why: Researchers suggest that this may also have to do with estrogen, which protects neurological function by activating certain proteins or interacting with molecules called free radicals. Men's relative lack of estrogen leaves them with less protection.Several studies have also pointed to the possibility that Parkinson's disease has a genetic link to the male X chromosome.

Males are also more at risk for the following:

- Autism
- Kidney stones
- Pancreatitis

Stroke.

Women are more likely to have a stroke.

Why: Many factors play into this statistic, but estrogen is chief among them. Women may not be aware of the effect estrogen has on stroke risk. They might know that birth control pills, hormone replacement therapy and pregnancy raise risk, but they may not understand the underlying mechanism, which is shifting estrogen levels.

Those changes in levels of estrogen, not the estrogen itself, affect the substances in blood that cause clots. More activity results in more clotting, and that can lead to a higher risk of stroke.

Osteoporosis.

Is disproportionately more common in women.
Why: Women start out with thinner, smaller bones and less bone tissue than men. Through most of their lives, women's bones are protected by estrogen, which may block a substance that kills bone cells.
However, when women begin to lose estrogen during menopause, it causes loss of bone mass (osteoporosis). This loss takes a toll: Nearly 50% of women over 50 will break a bone

because of osteoporosis.

Females are also more at risk for the following:

- Migraines
- Alzheimer's disease
- Urinary tract issues

Diabetes

Although it strikes men and women in nearly equal numbers and generally affects them in the same ways, it raises heart disease risk in women more than in men.However, the diabetes risk for women was lower to start with. Diabetes adds an extra risk factor for women and essentially puts them at the same risk for heart disease as men.

Depression

Women have higher rates of depression, but men have higher suicide rates.This paradox may have more to do with the way we define and diagnose depression than anything else, says Strauss. "We may find that if we add questions about rage, substance abuse and risk-taking behaviours to our depression questionnaire, we'd identify more males at risk."

Protecting health is gender neutral

Men and women basically need to do the same things to take care of themselves — at the core that means living a healthy lifestyle. Eating a healthy diet, exercise and not smoking,

10.6 GENDER AND HEALTH QUESTIONAIRE FOR SURVEY

10.6 GENDER AND HEALTH QUESTIONAIRE FOR SURVEY

Name of Interviewer_____ Date _____

Name of respondent_____ Husband's Name _____

Number of children:

a. Boys_____b. Girls_____c. Total_____

Total number of Family Members. (Resident and not visiting relatives). ----------

Level of education_____Occupation_____Number_____

No	Question	Response
1	What are all the different illnesses that women experience in the community?	
2	What was life like when you were young?	
3	How many times have you been pregnant?	
4	How do these pregnancies effect your health?	
5	How would you say your health is?	
6	Do you feel weak or tired?	
7	What things have made you weak and sick?	
8	What things have made you healthy?	
9	Where do you go and whom do you consult when you are ill?	
10	What happens during meals, who eats first?	
11	Who make decision about cash?	

12	Who is the most important person in your house and why?	
13	What ways are men and women treated differently in your household?	
14	How do others treat that person?	
15	What responsibility does each person have to the household?	
16	What benefit does that person gain from the household?	
17	Who is the second most important person in the household?	

10.7 VIOLENCE AGAINST WOMEN (VAW)

VIOLENCE AND ABUSE

Through years, violence has been increasingly found to have negative health outcomes. Sexual assault and violence against women have been estimated to account for 20% of the health burden among women aged 15 to 44 years. The general impact of violence on the health of women has been attributed to various reproductive health risks and problems that are consequences of gender-based victimization. These health risks and problems include emotional and psychological disturbances, physical injuries, and unwanted pregnancies, sexually transmitted infections (STIs) such as human immunodeficiency virus (HIV), decreased sexual desire, pain during sex, and chronic pelvic pain.

Health providers should discuss and assess the possibility of pregnancy in all women who have been sexually assaulted. The possibility of pregnancy is the usual concern of most women victims (particularly if sex was unprotected). The chance of pregnancy after an assault is reported to be at 2% to 5% among victims not protected by some form of contraception at the time of the attack.

Moreover, the risk for acquiring complications such as sepsis, spontaneous abortion, and premature birth is high when the pregnancy is complicated with STI.

The management of victims should be therefore comprehensive to appropriately address violence-related problems. Healthcare providers are expected to provide counselling and social support to promote quick recovery.

Follow-up consultations should also be offered to adequately cover current and long-term consequences of the victimization. All clients should have access to follow-up services, including a medical review at two weeks, three months, and six months' post-assault, with referrals for counselling and other support services

VIOLENCE AGAINST WOMEN

The United Nations defines violence against women as "any act of gender-based violence that results in, or is likely to result in, physical, sexual, or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life."

Scope of the problem

Globally 1 in 3 women experience physical and/or sexual violence in their lifetime, mostly by an intimate partner. This is a stark reminder of the scale of gender inequality and discrimination against women.

In developing countries, VAW is recognized and defended in the name of culture and tradition aimed at preserving male dominance and female subjugation. The expression of VAW include beating, honor killings, dowry deaths, son preferences.

- In Pakistan Rape is among the frequent forms of VAW
- There were thrice as many minors kidnapped as married women
- Of the reported murders of women, large number occur at the hands of close

relatives, on basis of immorality

- Press releases often show stove deaths
- Prevalence of KARO KARI in Sindh
- Presence of women in prisons on account of hudood and diayat laws.

Gender based violence is defined as "any act of gender-based violence that results in, or is likely to result in, physical, sexual, or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life."

Intimate partner violence refers to behaviour by an intimate partner or ex-partner that causes physical, sexual or psychological harm, including physical aggression, sexual coercion, psychological abuse and controlling behaviours.

Sexual violence is "any sexual act, attempt to obtain a sexual act, or other act directed against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting. It includes rape, defined as the physically forced or otherwise coerced penetration of the vulva or anus with a penis, other body part or object."

Definitions of Terms Common in VAW:

Rape:

Most women who are sexually assaulted already know their attackers ; friends, acquaintances, intimates, or family members, Women who are assaulted and raped suffer myriad health consequences i.e. severe injuries, unconsciousness, mental illness and trauma, STIs, and unwanted pregnancies. Stigma leads some to commit suicide. In all cultures, the rape survivor is suspected of or having colluded with the rapist. Since women are traumatized and stigmatized by the experience, only a small proportion of rapes are reported. T

Incest:

It is defined as sexual relations between close relatives, for example an uncle and niece, father and daughter.

Sexual Harassment:

It includes sexual advances, demands for sexual favours and verbal or physical gestures of a sexual nature, all fall under this category.

Honor killing:

It is considered to be a great disgrace and dishonour to a family whose daughter goes away and gets married to a man of her own choice instead of traditional marriage. After the girl leaves the house of her parents in this way, it becomes incumbent upon both the family of girl and the boy to kill them. This is called honour killing.

Trafficking of girls and women:

Millions of children are in the global sex market and an increased number are introduced to the trade. In developing countries, commercial demand for young women brings children from poor families in the country into the cities, where the sex industry pimps them to the wealthy, including some tourists. Many women are kept in different brothels, with all their fundamental rights denied. These women are under immense vulnerability of HIV and STIs infection.

Prostitution:

Among all threats to women's life and safe motherhood, prostitution is the most noteworthy. Many poor women as well as some affluent women are now engaged in this derogatory vocation. The lives of these women are at great risk since most of them suffer from malnutrition, infection of syphilis, gonorrhea and above all HIV & AIDS. When these women give birth, they run the highest risk of maternal deaths and the children born also bears the rises of HIV infection and other sexually transmitted infections.

Risk factors

Factors associated with intimate partner and sexual violence occur at individual, family, community, and wider society levels. Some are associated with being a perpetrator of violence, some are associated with experiencing violence and some are associated with both.

Risk factors for both intimate partner and sexual violence include:

1) lower levels of education (perpetration of sexual violence and experience of sexual violence);
2) a history of exposure to child maltreatment (perpetration and experience);
3) witnessing family violence (perpetration and experience);
4) antisocial personality disorder (perpetration);
5) harmful use of alcohol (perpetration and experience);
6) having multiple partners or suspected by their partners of infidelity (perpetration);
7) attitudes that condone violence (perpetration);
8) community norms that privilege or ascribe higher status to men and lower status to women; and
9) low levels of women's access to paid employment.

Factors specifically associated with intimate partner violence include:

1) history of violence
2) marital discord and dissatisfaction
3) difficulties in communicating between partners
4) male controlling behaviours towards their partners.

Factors specifically associated with sexual violence perpetration include:

1) beliefs in family honour and sexual purity
2) ideologies of male sexual entitlement
3) weak legal sanctions for sexual violence.

Gender inequality and norms on the acceptability of violence against women are a root cause of violence against women.

Health consequences

Intimate partner (physical, sexual and emotional) and sexual violence cause serious short- and long-term physical, mental, sexual and reproductive health problems for women. They also affect their children, and lead to high social and economic costs for women, their families and societies. Such violence can:

1) Have fatal outcomes like homicide or suicide.
2) Lead to injuries, with 42% of women who experience intimate partner violence reporting an injury as a consequence of this violence.
3) Lead to unintended pregnancies, induced abortions, gynaecological problems, and sexually transmitted infections, including HIV. They are also twice as likely to have an abortion.
4) Intimate partner violence in pregnancy also increases the likelihood of miscarriage, stillbirth, pre-term delivery and low birth weight babies. The same 2013 study showed that women who experienced intimate partner violence were 16% more likely to suffer a miscarriage and 41% more likely to have a pre-term birth.
5) These forms of violence can lead to depression, post-traumatic stress and other anxiety disorders, sleep difficulties, eating disorders, and suicide attempts. The 2013 analysis found that women who have experienced intimate partner violence were almost twice as likely to experience depression and problem drinking.
6) Health effects can also include headaches, back pain, abdominal pain, gastrointestinal disorders, limited mobility and poor overall health.
7) Sexual violence, particularly during childhood, can lead to increased smoking, drug and alcohol misuse, and risky sexual behaviours in later life. It is also associated with perpetration of violence (for males) and being a victim of violence (for females)

Impact on children

- Children who grow up in families where there is violence may suffer a range of behavioural and emotional disturbances. These can also be associated with perpetrating or experiencing violence later in life.
- Intimate partner violence has also been associated with higher rates of infant and child mortality and morbidity (through, for example diarrhoeal disease or malnutrition).

Social and economic costs

The social and economic costs of intimate partner and sexual violence are enormous and have ripple effects throughout society. Women may suffer isolation, inability to work, loss of wages, lack of participation in regular activities and limited ability to care for themselves and their children.

DOMESTIC VOILENCE (INTIMATE PARTNER VIOLENCE):

Domestic violence refers to a range of abusive, controlling, and damaging behaviours (physical, sexual, verbal and emotional) by one family member against the other to have control, usually by the husband towards the wife. Domestic violence occurs across gender and the preponderance of the violence in our society is specially directed towards the women.

Domestic Violence follows a predictable and repeating pattern. This pattern is termed the cycle of violence and consists of three components:

1) Tension building
2) Explosion followed by battering
3) Absence of tension, also called loving respite, honeymoon phase, reconciliation.

Understanding the dynamics of the domestic violence cycle is important in intervening in abuse.

During the tension-building phase, the victim attempts to be exceedingly compliant to the abuser in the hopes of preventing another episode of battering. Regardless of the effort upon the part of the victim, the abuser continues to become increasingly angry. Sometimes the victim will dread the battering episodes so horribly, that they either will consciously or unconsciously precipitate the event to get the battering episode over with.

After the battering episode concludes, the abuser becomes very remorseful and loving for a period. As the cycle of violence deepens the time between episodes grows shorter and the battering episodes more intense.

There are four main reasons that the victim often stays within reach of the abuser love, hope, dependence, and fear.

Stages of thoughts of the victim

Precontemplation

In this stage the victim of abuse has no thoughts of change.
The victim may even feel that they are deserving of the abusive treatment that they have received. Persons who are unwilling or unable to change are classified at this stage. In Precontemplation, the victim will be unwilling to receive help. However, inquiry on the part of health care providers will alert the victim that they are in an abnormal state and move the victim toward contemplation.

Contemplation

This can be a prolonged stage on the road to change, perhaps lasting for years. The victim realizes that a problem exists and begins to weigh the pro and cons of removing themselves from the abuser. However, in this stage the victim is still not ready to expose the abuser.

Disclosure

This is the stage when the victim finally discusses the abuse with the healthcare provider.

THE ROLE OF THE FWW AT THE STAGE OF disclosure IS VERY IMPORTANT.SHE MAY BE THE ONLY CONFIDANT, THE WOMAN HAS.THE PRIMARY ROLE OF FWW IS TO REPORT THE ABUSE TO HER SENIORS, FOR HER OWN SAFETY SHE MUST NOT INTERVENE ON HER OWN

TYPES OF DOMESTIC VIOLENCE:

Physical Abuse

This is the use of physical force against a partner or other household member. Includes hitting, striking, biting, and shoving the victim. Other less violent forms include pinching, or scratching. Physical harm to the victim does not have to occur

Sexual Abuse

This is a forced non-consensual act or attempted act of sexual intercourse with the victim. Refers to any activity in which one person uses another for his or her own sexual gratification.

Threats

Threats may be of a sexual or physical nature. The threats may involve actual or perceived harm to the victim or family members of the victim such as children, elders, or even pets.

Emotional /verbal Abuse

Involves threats to the victim or family. Destruction of the victim's self-esteem, name calling or other attacks on character or social standing. May also involve preventing the victim from interaction with friends, family, or other social encounters. This also includes stalking.

Signs of Domestic Violence

The patient who is a victim of domestic violence may have a history of multiple care providers, but only a few visits made to each one, or the patient may have repeated visits with vague symptoms and multiple complaints

Physical symptoms include multiple bruises with different healing stages, bruises or marks that resemble the hands or fingers. The bruises are usually in areas that can be easily covered up.

The patient may have a history of multiple fractures or fractures present for which treatment was never sought.

The abuse victim may exhibit a withdrawn personality, be vague in answering questions, and frequently misses or cancels appointments. Appointments that are cancelled by someone other than the patient, especially a domestic partner should be a red flag signal

A patient who is pregnant may have bruises to the abdomen and may have late entry into prenatal care.

An overbearing husband may accompany the patient when medical care is sought and answer all questions for the patient

FWW SHOULD BE ABLE TO IDENTIFY AND REFER TO APPROPRIATE LEVEL OF CARE

PREVENTION AND RESPONSE

Violence against women can be prevented. We now know more than before about what works to prevent violence against women. WHO with UN Women and 10 other agencies launched a framework with 7 strategies to prevent violence against women called RESPECT women. Each letter of **RESPECT** stands for one of 7 strategies as follows:

R – Relationship skills strengthened

E – Empowerment of women

S – Services ensured

P – Poverty reduction

E – Environments made safe

C – Child and adolescent abuse prevented

T – Transformed attitudes, beliefs and norms

Each of the above seven strategies has promising interventions including, for example, group-based workshops with women and men to promote egalitarian attitudes and relationships; gender empowerment training for women and girls; economic/cash transfers; and community mobilization to promote egalitarian gender norms.

Barriers to effective interventions

Barriers to effective intervention have been identified among health care personnel. If requests for help are not specifically verbalized by the patient, interventions for domestic violence and abuse frequently are not initiated. Some of the barriers to domestic violence intervention are:

- Social Factors: Implied or expected social norms, tolerance of domestic violence within the area, and cognitive immunity to the problem as a result of epidemic exposure.
- Personal Factors: Gender bias, personal abuse history, idealization of the family unit, privacy issues, feeling that one case will not change the big picture.
- Professional Factors: Time and staffing issues, personal comfort with handling domestic violence, inexperience with handling domestic issues, professional detachment or inversely professional involvement with the abuser or the victim
- Legal Factors: Lack of education or clear facility policies and positions on intervention. Concern over possible legal ramifications.
- Making judgments about the victim, their choices, or lifestyle. 'Profiling' the typical domestic violence victim. When assessing a patient, we need to adopt a suspicious warib ness to domestic violence and consider it as a differential diagnosis in a vast number of medical complaints. The patient may not even be aware that the true root of the physical problems rests with the experience of domestic violence.

OPTIONS FOR WOMEN FACING DOMESTIC VIOLENCE:

Support from family:

Women have contact with their natal family after marriage, but in certain areas, the contact may be minimal because she effectively now belongs to another family. In the absence of family support a woman especially if she has children, may have nowhere to go, and may end up staying in an abusive relationship.

Appeals to husband's family / friends:

If the husband is a relative, elders may intervene on the wife's behalf in extreme cases of domestic violence.

Community solutions:

Battered women may receive verbal support from the community which is unlikely to actively intervene. Many women are ashamed by the situation and withdraw from the community, which makes its role less effective.

Role of influential people:

Trying to get help from influential within the community can work if the person is sufficiently respected and feared by the husband. This intervention may ease a violent domestic situation. However, the husband may respond with more violence because of having been

shamed in front of the entire community. This type of action depends largely on the status and relative power of the families of concerned couples. It is also generally found to have worked in closed communities where the feudal lord or Sardar exerts influence on the community.

Shelters and Crisis Centers:

There are a number of shelters for women run both by the Government and NGOs like Dar-ul-Amans. These have been set up in major cities of the country. Although they are few, they at least help women to become independent and also offer legal aid services.

Paralegal / Legal aid groups:

Some NGOs provide training in legal awareness. Such training programs help the trainees to offer support to women facing domestic violence. It provides information about women's legal rights and gives women confidence and courage to negotiate or leave an abusive marriage.

Women Police Stations:

Although theoretically it is easy, but few women feel comfortable going to police stations. There are women's police stations in various cities which are staffed entirely by women police, where women can go for the registration of cases and seek help in situations of domestic violence. A special police force has been established in Punjab for women protection and it is hoped that it will help to reduce the violence against women

To achieve lasting change, it is important to enact and enforce legislation and develop and implement policies that promote gender equality by:

- ending discrimination against women in marriage, divorce and custody laws
- ending discrimination in inheritance laws and ownership of assets
- improving women's access to paid employment
- developing and resourcing national plans and policies to address violence against women.

While preventing and responding to violence against women requires a multi-sectoral approach, the health sector has an important role to play. The health sector can:

- Advocate to make violence against women unacceptable and for such violence to be addressed as a public health problem.
- Provide comprehensive services, sensitize, and train health care providers in responding to the needs of survivors holistically and empathetically.
- Prevent recurrence of violence through early identification of women and children who are experiencing violence and providing appropriate referral and support
- Promote egalitarian gender norms as part of life skills and comprehensive sexuality education curricula taught to young people.

Generate evidence on what works and on the magnitude of the problem by carrying out population-based surveys or including violence against women in population-based

demographic and health surveys, as well as in surveillance and health information systems.

Role of health care providers in violence against women:

Every family planning provider probably sees many women who have experienced violence. Physical violence includes acts such as hitting, slapping, kicking, punching, beating, and using a weapon. Sexual violence includes unwanted sexual contact or attention, coercive sex, and forced sex (rape). Violence against women can be psychological, too, such as insults, intimidation, threats to hurt someone she loves, humiliation, isolating a woman from family and friends, and restricting her access to resources.

Women experiencing violence have special general health, sexual and reproductive health needs. Providers of reproductive health care are in a good position to identify women who experience violence and to attend to their physical health needs as well as provide psychosocial support.

Women who experience violence often seek health services, although many will not mention the violence. Violence can lead to a range of health problems, including injuries, unwanted pregnancy, sexually transmitted infections (STIs) including HIV, decreased sexual desire, pain during sex, and chronic pelvic pain. Violence may start or become worse during a pregnancy, placing the fetus at risk as well. A man's violence or the threat of violence can deprive a woman of her right to make her own choice about whether to use family planning or what method to use.

DEALING WITH GIRLS AND WOMEN

The letters in the word "LIVES" are a reminder of the 5 tasks that protect women's lives—Listen, inquire about needs and concerns, Validate, Enhance safety, Support.

As FWW YOU CAN:

- Help women feel welcome, safe, and free to talk. Help women feel comfortable speaking freely about any personal issue, including violence. Assure every woman that her visit will be confidential.

Give the woman opportunities to discuss issues that concern her, for example, her husband's attitudes toward her use of family planning or any possible problems with using family planning. It is useful to ask if there is anything she would like to discuss. Most women will not bring up that they are being abused, but some may disclose it if asked. Be alert to symptoms, injuries, or signs that suggest violence. Violence at home may lead a woman to refuse or to insist on a specific family planning method, to resist family planning counselling, or to insist on reversal of female sterilization. Many pregnancies close together or requests for pregnancy termination also may reflect violence at home.

If violence suspected, ask about it.
Some tips for bringing up the topic of violence:

1) To increase trust, explain why provider is asking, because he/she wants to help.
2) Use open ended questions and language that is comfortable and best fits his/her own style.

3) Provider should not ask such questions when a woman's husband or anyone else is present or when privacy cannot be ensured.

4) To explore whether a client is experiencing partner violence and to support her disclosure of violence, first approach the topic indirectly. For example: "Many women experience problems with their husband or partner or someone else they live with". "I have seen women with problems like yours who have been having trouble at home."

More direct questions can be asked, such as these:

1) Are you afraid of your husband (or partner)?

2) Has your husband (or partner) or someone else at home ever threatened to hurt you or physically harm you in some way?

3) If so, when has this happened?

4) Does your husband (or partner) or someone at home bully you or insult you or try to control you?

5) Has your husband (or partner) forced you into sex or forced you to have any sexual contact you did not want?"

To explore further how violence affects a woman's reproductive and sexual life, ask these 4 questions:

1) Has your husband ever told you not to use contraception, blocked you from getting a method, or hidden or taken away your contraception?

2) Has your husband ever tried to force you or pressure you to become pregnant?

3) Has your husband ever refused to use a condom?

4) Has your husband ever made you have sex without using contraception so that you would become pregnant?

Offer first-line support.

In response to a disclosure of violence, you should offer first line support. First-line support provides practical care and responds to a woman's emotional, physical, safety, and support needs, without intruding on her privacy.

First-line support is the most important care that you can provide. Even if this is all you can do, you will have greatly helped your client. First-line support involves 5 simple tasks.

Provide appropriate care.

Tailor your care and counselling to a woman's circumstances. Treat any injuries or see that she gets treatment. Discuss with her how she can make the best choices for family planning in her circumstances. If your client wants a method that would be hard for her partner to detect or to interfere with, an injectable may be her best choice.

You might also discuss IUCDs and implants. Be sure to point out that even these methods

can sometimes be detected.

Make clear that these methods do not protect her against sexually transmitted infections (STIs), including HIV. Condoms are the only family planning method that protects against STIs as well as pregnancy. Give information and offer referral to support services, if available, for women's empowerment and skills building on condom use negotiation and safer sexual practices.

Provide emergency contraceptive pills if appropriate and wanted.

5-Document the abuse experienced by the woman.

Carefully and confidentially document the woman's history of abuse along with symptoms or injuries and the cause of the injuries if relevant. Record the relationship of the perpetrator to the woman

LIVES

Listen	Listen to the woman closely, with empathy, and without judging. Give her a chance to say what she wants to say in a safe, confidential, and private place to a caring person who wants to help. Listening is the most important part of good communication and the basis of first-line support. If she does not want to talk about violence, assure her that you are available whenever she needs you.
Inquire about needs and concerns	Assess and respond to her various needs and concerns. As you listen to the woman's story, pay particular attention to what she says about her needs and concerns and what she does not say but implies with words or body language. She may let you know about physical needs, emotional needs, or economic needs, her safety concerns, or social support that she needs. Respect her ability and her right to make her own choices about her life.
Validate	Show her that you understand and believe her. Validating another person's experience means letting the person know that you are listening closely, that you understand what she is saying, and that you believe what she says without judgment or conditions. Some important things that you can say: • "It's not your fault. You are not to blame." • "This happens to many women." • "You are not alone, and help is available."
Enhance	Discuss a plan to protect herself from further harm if violence occurs

Safety	again. Explain that partner violence is not likely to stop on its own. It tends to continue and may become worse and happen more often. You can ask: • "Are you or your children in danger now?" • "Do you feel safe to go home?" • "Is there a friend or relative who can help you with the situation at home?" If the woman faces immediate danger, help her consider various courses of action. If not in immediate danger, help her make a longer-term plan.
Support	Support her by helping her connect to information, services, and social support. Women's needs generally go beyond what you can provide in the clinic. You can help by discussing the woman's needs with her, telling her about other sources of help, such as shelter, social services, child protection, police, legal aid, financial aid, peer support, and assisting her to get help if she wants it.

RECOMMENDED METHODS:

LEVONORGESTREL (LNG) AND YUZPE METHODS

These can prevent pregnancy in instances of unprotected sex. Yuzpe method consists of higher doses of regular COC pills containing Levonorgestrel and Ethinyl estradiol. Enlisted below are the criteria for administering the LNG and Yuzpe methods among women who have been victims of sexual assault

1) Presence of risk for pregnancy
2) Consult for treatment sought within five days from the time of the assault with the expressed desire to prevent pregnancy
3) Pregnancy tests or other definitive tests have established that the client is not currently pregnant
4) If pregnancy cannot be ruled out, can the fore mentioned methods still be prescribed?
   a) Yes, as long as the following will be fulfilled:
   b) Full disclosure to the client that the pills will not be effective if she is already pregnant but will not affect the pregnancy nor harm the fetus
      - Advise the client coming to the health facility more than five days after the assault to return for pregnancy testing if she misses her next menstrual period.

10.8 REPRODUCTIVE COERCION

10.8 REPRODUCTIVE COERCION

Reproductive coercion (also called **coerced reproduction**) is threats or acts of violence against a partner's reproductive health or reproductive decision-making and is a collection of behaviours intended to pressure or coerce a partner into initiating or terminating a pregnancy Reproductive coercion is a form of domestic violence, also known as intimate partner violence, where behaviour concerning reproductive health is used to maintain power, control, and domination within a relationship and over a partner through an unwanted pregnancy. It is considered a serious public health issue. This reproductive control is highly correlated to unintended pregnancy

The three forms of reproductive coercion are pregnancy pressure, pregnancy coercion, and birth control sabotage; they can exist independently or occur simultaneously. Not complying with the husband's wishes may result in the partner acting out violently.

Pregnancy pressure:

Pregnancy pressure, or pregnancy coercion, is enacted by a woman's sexual partner when he pressures her into having unprotected sex in order to become pregnant, or into continuing or terminating the pregnancy. It might involve threats or acts of violence if the woman does not comply with the perpetrator's demands or wishes.

Reproductive pressure behaviours may result in unintended pregnancies that are then followed by coerced abortions. Women who seek abortions are nearly three times as likely to have experienced reproductive pressure by a partner in the past year, compared to women continuing their pregnancies. Forcing a woman to terminate a pregnancy she wants or to continue a pregnancy she does not want violates the basic human right of her reproductive health.

Birth control sabotage:

Reproductive coercion can take the form of birth control sabotage, either as verbal sabotage, behavioural sabotage, and/or acts as an active interference with contraceptive methods. Direct actions are taken to ensure the failure of birth control (such as poking holes in or breaking condoms) or complete removal of contraception (such as flushing birth control pills down the toilet or removing contraceptive rings or patches from the body). Husbands can also forbid women from using family planning or force them to have sex without protection.

Birth control sabotage is frequently associated with physical or sexual violence, and is a contributor to high pregnancy rates, especially teenage pregnancy rates among abused, disadvantaged women and teenagers

A strong correlation exists between domestic violence and birth control sabotage. These studies have identified two main classes of the phenomenon:

1) Verbal sabotage—verbal or emotional pressure not to use birth control or to become pregnant.
2) Behavioural sabotage—the use of force to have unprotected sexual intercourse or not to use birth control.

Gender and sexual power dynamics and coercion associated with sexual power dynamics are both linked to condom nonuse. In presence of high level of fear for abuse, even women with knowledge about STIs are likely to use condoms inconsistently.

Assessment and intervention

A typical assessment of women's reproductive health includes the following questions:

1) Has a current or former husband not let you use birth control, destroyed your birth control, or refused to wear a condom?
2) Has your husband ever tried to get you pregnant when you didn't want to be?
3) Has your husband ever forced you to have an abortion or caused you to have a miscarriage?
4) Has your husband ever purposely given you an STD?
5) Are you worried you might be pregnant?

Clinical implications discovered through case studies are the following: to assess for reproductive coercion as a part of a routine family planning care; to assess reproductive coercion before discussing contraceptive options; to offer discreet birth control methods; and to assess safety. Some believe that all reproductive health care settings should have a written protocol for identifying and responding to domestic violence that includes reproductive coercion, and agencies that already have a protocol should be reviewed and expanded to address reproductive coercion.

10.9 SEXUAL VIOLENCE

10.9 SEXUAL VIOLENCE

Sexual violence is any non-consented action of a sexual nature, including rape, attempted rape, sexual exploitation and sexual abuse. Sexual violence is a subset of the broader category of gender-based violence (GBV). GBV is an umbrella term for any harm that is perpetrated against a person's will that results from power inequities that are based on gender roles. Violence may be physical, sexual, psychological, economic or socio-cultural

The reason for addressing sexual violence in the MISP is to prevent rape and sexual exploitation and abuse, provide medical care for rape survivors and to ensure the availability of essential psychosocial services.

Once the situation stabilizes and all components of the MISP have been implemented, attention can be given to preventing the wider array of violence issues, including domestic violence; early and/or forced marriage; female genital mutilation/cutting; forced sterilization or forced pregnancy; forced or coerced prostitution; trafficking of women, girls and boys; and additional forms of GBV.

Why is preventing sexual violence a priority?

Although sexual violence is common even during peacetime, natural disasters and conflict increase the risk of rape and other forms of sexual violence. Women and adolescents are especially vulnerable to sexual abuse committed by combatants. The use of rape as a strategy of war has been documented in several conflicts as an effective means of controlling, degrading and humiliating a community.

It is important to recognize that sexual violence may increase after natural disasters as well; it is therefore imperative to ensure that prevention and response mechanisms are also in place in these settings. It is critical to prevent sexual violence because it is a human rights violation. Survivors may suffer from depression and anxiety, attempt/complete suicide, contract HIV or other STIs, become pregnant, or may be shunned by their families or communities. Moreover, the impact of sexual violence is manifold: it impacts the survivor's physical and mental health and social well-being, while also having possible consequences for the survivor's family and wider community.

Who is impacted most by sexual violence?

Sexual violence in crisis-affected settings does not happen in a vacuum. Most reported cases of sexual violence among crisis-affected communities and in most settings around the world involve male perpetrators committing violent acts against females. While all women in crisis-affected settings are susceptible to sexual violence, adolescent girls are exceptionally vulnerable as they are often targeted for sexual exploitation and rape.

In addition, sexual violence, even if exclusively perpetrated against women and girls, often affects and undermines the entire community including fathers, brothers, husbands and sons of the survivor. It is important to recognize that anyone can be a survivor of sexual violence (women, girls, boys and men of all ages) and to ensure that services are available and accessible to all.

Who are the perpetrators of sexual violence?

Perpetrators may be others who have been displaced by the conflict or disaster; members of other clans, villages, religious groups or ethnic groups; military personnel; rebel forces; humanitarian workers from UN agencies or NGOs; members of the host population; the community; or family members. Perpetrators may also be male or female.

In short, anyone can perpetrate sexual violence. Rape may be used as a strategy of warfare to intimidate and traumatize a population, in which case the perpetrators are enemy combatants, but perpetrators of opportunistic rape can be anyone acting with impunity in the climate of lawlessness that accompanies armed conflict and after natural disasters.

When does sexual violence occur?

Sexual violence can happen anytime during displacement, including prior to fleeing one's home area, during flight, while in the country of asylum and during repatriation and reintegration. It can occur in crisis-affected communities after a natural disaster, even among those not displaced from their homes. In addition, sexual violence frequently escalates in displaced settings as normal social structures are disrupted. Immediate prevention and response measures must be adapted to suit these different circumstances.

What are the key actions that should be taken to reduce the risk of sexual violence?

As part of the work of the overall health sector/cluster mechanism, the RH Officer and RH program staff must:

1) Ensure women, men, adolescents and children have access to basic health services, including sexual and RH services;
2) Design and locate health facilities to enhance physical security, in consultation with the population and in particular with women and adolescents
3) Consult with service providers and patients about security in the health facilities

Prevent and manage the consequences of sexual violence

Historically, sexual violence has consistently been a result of situations of conflict and forced migration, including natural disasters, and it continues to be so today. It is therefore urgent that all actors responding in an emergency are aware of this issue and put protective measures in place immediately proper layout of facilities such as latrines, for example, can reduce women's exposure to risk. Women and girls who have experienced sexual violence should receive health care as soon as possible after the incident in order to avert preventable consequences, such as unwanted pregnancies and life-threatening infections.

If left unaddressed, sexual violence may have serious negative personal and social consequences for women and girls, as well as for their families and the larger community.

Psychosocial services that help to heal and empower/rehabilitate women are necessary.

Protection and community services staff should also be involved in offering legal support to

survivors of sexual violence.

Steps to reduce these incidents

1) Locate separate male and female bathrooms and washing areas in the health facility in a secure location with adequate lighting at night, and ensure doors lock from the inside
2) Ensure all ethnic subgroup languages are represented among service providers or interpreters are available
3) Hire female service providers, community health workers, program staff and interpreters
4) Inform service providers of the importance of maintaining confidentiality and have them sign and abide by a code of conduct against sexual exploitation and abuse
5) Ensure that codes of conduct and reporting mechanisms on sexual exploitation and abuse by health staff are in place, as well as relevant punitive measures to enforce them.

Urban Settings:

1) With all stakeholders to the humanitarian response, identify the specific risks for sexual violence in the setting and develop targeted protection measures.
2) Displaced populations, particularly women and girls, may be at additional risk of rape and sexual exploitation and abuse in an unfamiliar urban setting as they struggle to obtain their basic and survival needs.
3) As it may be difficult to identify and access displaced women in urban settings, it is important to discover creative ways to reach out to inform them of where and why to receive services after rape.
4) Working with a local women's organization to establish a hotline where displaced women can speak to someone (in their own language) about sexual violence, for example, may be helpful.

Adolescents:

Provide adolescent-friendly care for survivors of sexual violence at health facilities and encourage adolescent participation in any multi-sectoral GBV prevention task force.

What are the key actions that should be taken to respond appropriately to survivors?

RH Officers and program staff must:

1) Establish a private consultation area with a lockable filing cabinet
2) Put in place clear protocols and sufficient supplies and equipment
3) Hire male and female service providers fluent in local languages, or, where this is not possible, hire trained male and female chaperones and translators
4) Involve women and male and female adolescents in decisions on accessibility to

services and on an appropriate name for the services;

5) Ensure that services and a referral mechanism to a hospital for life-threatening complications are available 24 hours a day/seven day a week

6) Once services are established, inform the community why, where and when (as soon as possible after a rape) these services should be accessed.

7) Use communication channels appropriate to the setting (e.g., through midwives, community health workers, community leaders, radio messages or information leaflets in women's toilets)

What are some situations that put women and girls at risk of sexual violence?

It has been shown that women without their own personal documentation for collecting food rations or shelter materials are vulnerable because they may be dependent on males for their daily survival. It also has been demonstrated that when men (fellow displaced persons or humanitarian actors) alone are responsible for distributing food and other essential goods, women and children may be forced to perform sexual favours in order to obtain their survival needs.

Women and girls may have to travel to remote distribution points for food, firewood for cooking fuel and water. Their living quarters may be far from bathrooms and washing facilities. Their sleeping quarters may be unlocked and unprotected. Lighting may be poor. Male and female bathrooms and washing facilities may not be separate or these facilities may be located in insecure areas of a camp. Given the stressful circumstances of displacement, women and girls may also be at increased risk of intimate partner violence. All of these circumstances leave women and girls vulnerable to abuse and sexual assault.

Lack of police protection and lawlessness also contribute to an increase in sexual violence. Police officers, military personnel, humanitarian workers, camp administrators or other government officers may themselves be involved in forcing women and girls to engage in sexual activity for security, services or other support. If there are no independent organizations, such as UNHCR or NGOs, to help ensure personal security within a camp, the number of incidents often increases. It is important that female protection officers are available since women and girls are often more comfortable reporting protection concerns and incidents of violence to another woman.

Why are incidents of sexual violence often not reported?

Even in non-crisis settings, sexual violence often goes unreported due to a range of factors, including fear of retribution, shame, stigma, powerlessness, lack of support, the unreliability of public health and other services, lack of trust in the services and the lack of confidentiality and unfamiliarity with the services. All these circumstances are exacerbated in humanitarian settings, increasing the likelihood that incidents of sexual violence within the population will go unreported. While ensuring that clinical management and other services is an essential part of the response, addressing sexual violence goes beyond this and must also include an environment where women are protected, supported and able to access this service.

Multisector coordinated mechanisms to prevent sexual violence must be in place to provide confidential health services to manage survivors of rape are in place, including:
Emergency contraception
PEP
Antibiotics to presumptively treat STIs
Care of wounds and prevention of tetanus (Tetanus toxoid/tetanus immunoglobulin)
Hepatitis B vaccine
Wound care
Referrals to health, psychological and social support services

Inter-agency RH Kit(s)
Kit 3: Rape Treatment Kit (pink)
Kit 9: Suture of Tears 9cervical &vaginal) and Vaginal Examination Kit (purple)

Hurdles in seeking justice

Social	Legal / Procedural
• Fear of taking action. • The contradiction between the need for immediate medico legal action and for the victim's physical and psychological state. • The victim's inability to describe the event. • Lack of awareness of rights and legal procedures. • Social pressure on victim to compromise. • Lack of support system.	• Lack of Police sensitization to issues of domestic violence. • Lack of resources for women police stations. • Lack of sensitization of medical professionals. • Complications of medico-legal procedures. • Non-recognition of many forms of domestic violence in legal provisions. • Inadequate legal provisions for domestic violence offences.

10.10 STATUS OF WOMEN IN DIFFERENT SITUATIONS IN PAKISTAN

10.10 STATUS OF WOMEN IN DIFFERENT SITUATIONS IN PAKISTAN

Women form almost half of our population, and it is impossible for the country, society and households to prosper without women's health and well-being. Women need to be empowered with education and necessary life skills.

Throughout its history, Pakistan has produced many women of metal who have not only excelled in their personal and professional lives but have also inspired and empowered many others Miss Fatima Jinnah, the co-founder and sister of Quaid-e-Azam is one of the prominent examples of gender equality. She worked with her brother for Pakistan equally. After Miss Fatima Junnah, Pakistani women drastically crossed the milestone of gender equality and produced the under mentioned wonderful women.

1) Benazir Bhutto was the first Muslim female Prime Minister of a Muslim country.
2) Bano Qudsia was female Urdu and Punjabi play writer and novelist. She known for her unique style in the world.
3) Parveen Shakir was another famous lady Urdu poet, professor and bureaucrat in the history of Pakistan.
4) Dr. Shamshad Akhtar is a well-known PhD scholar, diplomat and intellectual. She also served as Governor of state Bank of Pakistan.
5) Major General Shahida Malik (Retired) is the first female General in the history of Pakistan Army.
6) Mariam Mukhtar was the first Flying Officer in history of Pakistan, who embraced Shahadat at the age of twenty-two. Similarly, Hina Tahir was the first fighter pilot of Pakistan Air Force.
7) Similarly, Arfa Karim was the first youngest Microsoft Certified Professional (MCP).
8) Malala Yousafzai is the first Pakistani Nobal Prize holder woman

Women in Pakistan play a major role to play as housewives and mothers. They are the ones responsible for the upbringing of their children. Since women have now become educated, they can teach their children the values and etiquettes of life. Not only that, but women could also now teach their own children at home after they come back from school. Previously families had to spend excessive amounts of their income to send their children for tuitions because the mothers were not educated enough to guide their children academically but now with most mothers being educated they could sit with their children and help them with their homework.

A few decades ago, women in Pakistan were thought to play the traditional role of being housewives only. However with changing times, the Pakistani society has also evolved. Women have a much significant role to play in the society rather than serving their husbands at home.

During this time of economic crisis when men are suffering from unemployment and lower wages, households require all members of the family to work and add to the family income.

So the wives have to go out and work so that they could earn enough to give their families a sufficient standard of living.

Women belonging to the lower income group and rural class have since independence played the role of family earners. They have served in households by rendering their services such as that of cooks, servants, cleaners, etc. While the lower class women worked all day to earn two meals per day for their families, women of the middle class were supposed to stay at home and take care of the people living in their homes. However when the world entered the 21st century the position of women in the country transpired. More women were allowed to acquire higher education and then work in the corporate world to earn for themselves and their families

Women in Pakistan now form a relatively greater part of Pakistan's working population and their contribution to the country's economy has ever since been increasing. However men still dominate all the higher posts in private and public offices, the trend is now changing as women are being encouraged by being awarded with promotions for their high quality of work.

The mindset of the people in the rural class is also changing, there is greater awareness regarding the importance of education for both boys and girls and there has been an increase in the enrollment of lower income class girls in primary and secondary schools. Almost all of the women belonging to the middle-class families have now started acquiring higher education

Although there is greater acceptability for women in Pakistan's society, they are still victims of discrimination. The gender stereotypes which have existed in the society for years still continue to be a barrier for women's progress in the country

HARASSMENT

Definition:

Sexual harassment is a form of sex discrimination that occurs in the workplace. The legal definition of sexual harassment is "Unwelcome verbal, visual, or physical conduct of a sexual nature that is severe or pervasive and affects working conditions or creates a hostile work environment."

Protection against Harassment of Women at the workplace Act, 2010:

To protect women against such harassment at their workplace, Government of Pakistan has implemented "Protection against Harassment of Women at the Workplace Act, 2010" in all organizations. Every organization has an internal committee to work in this regard and to undertake

The following measures for implementation of this act:

1) Adaptation of code of conduct prescribed by law.
2) The committee will immediately address the complaints of sexual harassment as per law, as and when received.
3) Ensuring the justice is done swiftly and retaliation against the complaints is curbed.

4) Informing and educating the employees to make them more aware of the provisions of the act and to encourage a professional and dignified work environment for the women in public and private sectors.

10.11 THE CONVENTION ON THE ELIMINATION OF ALL FORMS OF DISCRIMINATION AGAINST WOMEN (CEDAW)

10.11 THE CONVENTION ON THE ELIMINATION OF ALL FORMS OF DISCRIMINATION AGAINST WOMEN (CEDAW)

CEDAW of which Pakistan is a signatory calls for 'the equal rights of men and women to enjoy all economic, social, cultural, civil and political rights".

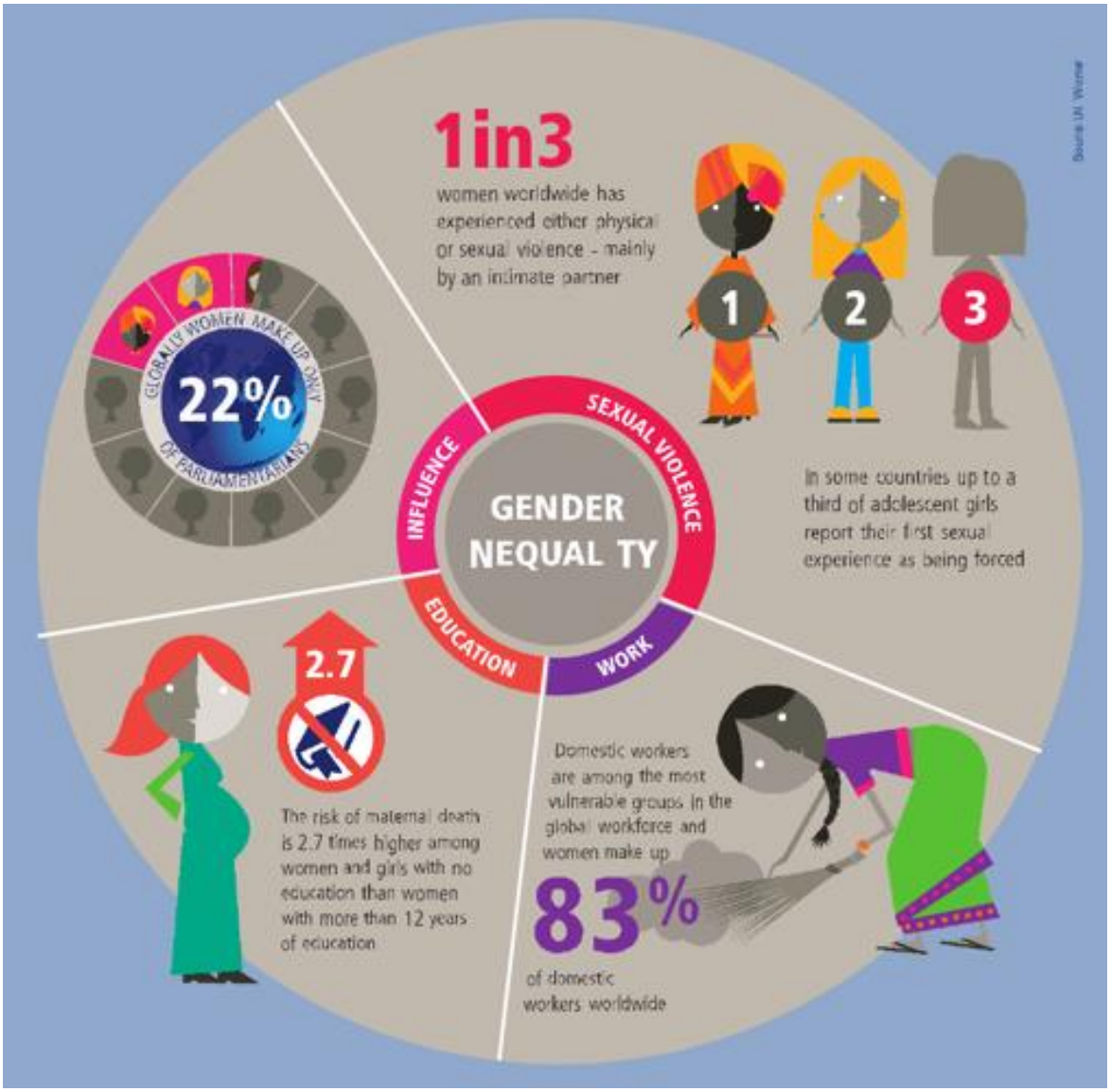
Reproductive Health eludes many of the people because of such factors as: inadequate levels of knowledge about human sexuality and inappropriate or poor-quality reproductive health information and services; the presence of high-risk sexual behavior; discriminatory social practices; negative attitudes towards women and girls; and the limited power of women and girls over their sexuality and reproductive lives.

Evidence from many parts of the world shows that one of the major determinants of infant, child and maternal mortality is the level of education of the mother. Children of literate mothers are generally better nourished and healthier than the children of illiterate mothers. The more education a woman has, the smaller is the risk of death or serious health problems related to childbearing.

Severe inequality between women and men, boys and girls is seen in many aspects of life in Pakistan. Most of the women, especially in the rural and uneducated groups remain structurally disadvantaged and second-class citizens as a result of legal and societal discrimination premised on social and cultural norms and attitudes. The girl child is further burdened under these religion-socio-cultural constraints, restricting her mobility, choices and access to human rights.

Government of Pakistan's response to the situation of women

In March 2003, the Government of Pakistan established a Permanent Commission on the status of women in order to eliminate all forms of discrimination against women. The commission has been assigned the task of examining existing policies, programs, and legislation concerning women and has recommended a number of measures for instituting women development and gender equality. A National Plan of Action for women was prepared through a consultative process. The prime focus of this plan is on education, reproductive health, family planning, economic empowerment and domestic violence



A snapshot of gender inequality

Overcoming disproportionate discrimination

Gender inequality is pervasive, and women and girls remain disproportionately discriminated against across social, economic and public life. However, the diverse lives of women and girls around the world shows the route to a different future. Despite widespread gender inequality, women and girls are making ends meet, they are caring for their families, pursuing work opportunities, organizing collectively and mobilizing for change. Ensuring universal access to sexual and reproductive health and rights for all is crucial to making this change happen.

[1]For gender relations to be transformed, the structures that underpin them have to change. Women and girls should be able to lead lives that are free from violence; they should have opportunities to expand their capabilities and have access to a wide range of resources on the same basis as men and boys. They should have a real presence and voice in the full range of institutional fora where decisions are made that shape their lives and the functioning of their families and societies

Moving beyond constraining stereotypes

Until recently, women's empowerment has been dealt with in a narrow way in which gender equality and women's empowerment has either excluded sexuality or focused on the negative aspects of sexuality such as disease, violence and abuse, and highlighted the constraints that women face when exercising decision making and control over sexual and reproductive decisions. While it is important to pay attention to the harmful and negative aspects of sexuality, solely focusing on these aspects can give rise to the dominance of victim narratives and lock both men and women into constraining and unhelpful stereotypes.

Changing social norms

Looking at the pleasurable aspects of sexuality invites a truer reflection of real women's lives and a greater understanding of all the possibilities that can contribute to women's empowerment. It is proven that services, information, education and social conditions that allow women to maintain good sexual and reproductive health and realize their sexual and reproductive rights are needed to advance gender equality and enable the empowerment of women and girls. Gender equality is an important end in itself; it can also have a transformative effect on achieving sustainable development. Prioritizing and investing in sexual and reproductive health and rights has the potential to contribute to achieving gender equality which, ultimately, has transformative potential for sustainable development. Sexual and reproductive health and rights must be brought into mainstream development discussions on gender equality and empowerment if we are to make a positive and lasting difference to the day-to-day lives of women

Enhancing Public Awareness on Sex discrimination against Girls:

The F.W.W can enhance public awareness on sex discrimination against girls and bring about a behavioral change in the community by involving:

Married women of reproductive age i.e. "Mothers"

The mothers can play a vital role regarding the health, nutrition, education, love &affection and avoiding acts of discrimination. The mother can achieve this through their own actions, role models in the community, interaction with their husbands (father of the child) and interaction with their sisters and friends.

Elderly women in our society

In-spite of being females themselves forgets the discrimination they had to suffer in their childhood and play a key role in sex discrimination against girls. They are the first ones to condemn their daughters-in-law for giving birth to a female baby and so on and so forth.

The elderly women can help to fight sex discrimination through their own actions, which should be corrected in the first instance and afterwards they should have interaction with elderly men in the family especially with their son (i.e., father of the girl child)

Men in the community will be informed of the issues during interaction with F.W.A (male) and they are being the decision makers in the family can be of great help.

Village Management Committee and Influential: Members can talk about these issues

during their group meetings in the community and can influence other men to have a positive attitude.

10.12 THE STATUS OF WOMEN IN ISLAM

10.12 THE STATUS OF WOMEN IN ISLAM

Islam raised the status of the women and gave them human, civil, and economic rights never previously given to women. The woman is considered equal to man in religious, social and patriotic responsibilities, however the husband has the lead in family affairs.

Women's privileges: -

- She cannot be forced in marriage by family / guardian. She has to give her consent.
- She can keep her maiden name after marriage as a token of personal independence.
- She is financially independent and can do with her money as she pleases. While the husband (father or brother) is responsible for providing for her and the children.
- In inheritance, as a daughter gets half of her brother's share; but in other circumstances she gets as much as or even more than other men in the family.
- As a mother she is placed ahead of her husband regarding children's loyalty and affection.
- She is privileged to speak up for her rights (within the decency of Islamic traditions)
- Has an independent personality
- Equal to man in religious duties
- Equal in the right to education
- Equal in reward of her deeds as well in defending her beliefs
- Has complete and total control of her possessions
- She is free to choose her marriage partner
- Has the right to demand the power of divorce plus the power at the time of marriage contract to disallow polygamy by her husband
- She is responsible for her family, but the man has the primary responsibility
- Economic independence and equal legal capacity. This means that she has the ability to enter into all kinds of contractual arrangements and conduct business on her own without the need for her husband's consent.

STEPS FOR ENHANCEMENT OF WOMEN STATUS

The government of Pakistan has taken many initiatives to help [protect women and girls) including:

Anti-harassment cells in government institutions

Women Protection Authority

Sexual and reproductive health rights bill (pending approval)

Punjab commission for status of women

Women protection helpline 1043

VAW Centre Multan

Special police units for VAW

Mobile apps for VAW

The efforts to uplift the women's status in society include:

- Establishing mechanisms for women's equal participation and equitable representation at all levels of the political process and public life in each community and society and enabling women to articulate their concerns and needs.
- Promoting the fulfillment of women's potential through education, skill development and employment, giving paramount importance to eliminate poverty, illiteracy and ill health among women.
- Eliminating all practices that discriminate against women; assisting women to establish and realize their rights, including those that relate to reproductive and sexual health.
- Adopting appropriate measures to improve women's ability to earn income beyond traditional occupations, achieve economic self-reliance, and ensure women's equal access to the labour market and social security systems.
- Eliminating violence against women.
- Eliminating discriminatory practices by employers against women, such as those based on proof of contraceptive use or pregnancy status.
- Making it possible, through laws, regulations and other appropriate measures, for women to combine the roles of childbearing, breast-feeding and child-rearing with participation in the work-force."

STATEMENTS ABOUT MEN AND WOMEN

- Boys should be fed well since they are the future breadwinners of the family (Gender discrimination)
- Women give birth to babies, men do not (sex difference).
- Girls are gentle and boys are tough (gender stereotype / gender roles).
- Women cook and clean the house; men earn income through paying jobs outside of the home (gender roles).
- Amongst Indian agricultural workers, women are paid 40-60 percent of the male wage (Gender discrimination).
- Women can breastfeed babies; men can bottle feed babies. (Sex difference).
- Most building site workers in Britain are men (gender role, possibly gender discrimination).
- Men are better than women at math, physics and science (Gender stereotype).

- Girls reach puberty earlier than boys (Sex difference)
- In Ancient Egypt men stayed at home and did weaving while women handled family business. Women inherited property and men did not (gender discrimination).
- According to UN statistics women do 67 percent of the world's work, but their earnings amount to only10 percent of the world's income. (Gender discrimination).
- Men's voices break at puberty, women's voices do not (Sex difference).
- Girls should not be given high caloric diet because menstruation will start earlier (Gender discrimination)
- In one study of 224 cultures, there were five in which men did all the cooking and 36 in which women did the entire house building (gender roles).
- Women are soft-spoken and gentle; men are assertive and strong (gender stereotypes).
- Men make decisions about family planning and the number of children a couple will have (Gender role / gender discrimination).

10.13 EMPOWERING WOMEN AND PROMOTING GENDER EQUALITY & EQUITY

10.13 EMPOWERING WOMEN AND PROMOTING GENDER EQUALITY & EQUITY

Three Approaches of Women Empowerment

Women are generally the poorest of the poor, despite their central role as key agents of the development process. Power relationships operate from the most personal to highly public levels, impeding women's attainment of healthy and fulfilling lives. Many women and girls suffer from poor health because of their limited power over their sexual and reproductive lives.

Improving women's status and enhancing their decision-making in the area of sexuality and reproduction is essential for the long-term success of population programs. Education is one of the most important means of empowering women to participate fully in the development process.

The case for addressing gender equality has been a long-standing goal for the global development and health agenda including since before the 1994 International Conference on Population and Development (ICPD) in Cairo. The Cairo Programme of Action not only articulated the centrality of gender equality as a requirement for improving sexual and reproductive health, but also noted the imperative of engaging men to promote gender equality.

What is empowerment?

The World Bank defines empowerment (e.g., Women's empowerment) Empowerment is the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes. Central to this process are actions which both build individual and collective assets and improve the efficiency and fairness of the organisational and institutional context which govern the use of these assets.

Women empowerment is crucial

Sustainable Development Goal 5, "to achieve gender equality and empower all women and girls," and is a crucial part of work in education, finance, advocacy, and other initiatives contributing to "women's empowerment" all over the world.

APPROACHES FOR WOMEN EMPOWERMENT

The three classical approaches of women empowerment-

1) integrated development approach,
2) economic development approach and
3) consciousness raising and organizing approach

While these approaches differ from each other in concept, all these approaches have placed the importance on group formation to build solidarity among women and most organizations are working on the ground take a blend of approaches.

Integrated development approach:

Integrated Development Approach conceives that woman are powerless due to greater poverty and lower access to health care, education and survival resources. This approach views women's development as key to the advancement of family and community. It therefore provides a package of interventions to alleviate poverty, meet basic survival needs, reduce gender discrimination, and helps women to gain self-esteem. . This approach proceeds either by forming women collectives that engage in development activities and tackle social problems, like dowry, child marriage and male alcoholism.

Economic development approach: According to Economic Empowerment Approach, women are subordinated due to lack of economic power. It focuses on improving women control over material resources and strengthening economic security of women. It is necessary to make women collective. Groups are formed using two methods i.e., organizing women around savings and credit; income generation or skill training activities or by occupation or location These groups may work ranging areas including saving and credit, training and skills development, new technologies or marketing, as well as provide such ancillary supports as childcare, health services, literacy programs and legal education and aid.

The consciousness-raising approach asserts that women's empowerment requires awareness of the complex factors causing women's subordination. This approach organizes women into collectives that tackle the sources of subordination. Education is central and is defined as a process of learning that leads to new consciousness, self-worth, societal and gender analysis and access to skills and information. In this approach, the groups themselves determine their priorities, Women's knowledge of their own bodies and ability to control reproduction are also considered vital

THE WAY FORWARD

Both in the middle- and upper-class family, male is empowered to take all decisions. Hence women can participate rarely in the process of decision-making ins and outs of the family affairs if their husbands welcome them. Usually, women can't freely spend or use their income or loan. In most of the cases, they spend all of their credits as family maintenance cost. They also face assorted difficulties to repay their loans as they have control a bit over their loan. Income earning does not always work as an instrument to have the decisions.

Women are not aware of their rights and privileges due to illiteracy and ignorance. So awareness should be increased among the women as well as their male head. Women empowerment is a process of establishing control over resources. But the degree of control will depend on some factors, e.g., income level and poverty, education, social norms and values where male attitude is predominant. If the male heads give them more access, women will get greater control over resources.

For this reason, a comprehensive and coordinated approach comprising the existing three approaches of women empowerment would be needed to empower the women where special focus would be given on changing the attitudes of male towards their female. This approach can be termed as 'Change Approach'.

CHANGE APPROACH

It covers all the changes in the society related to women empowerment, i.e., change in values and attitudes, income, employment, education, access to property and resources, participation in taking the decision in the family

GENDER TRANSFORMATIVE APPROACH

A gender-transformative approach means that promoting gender equality—the shared control of resources and decision-making—and women's empowerment are central to an intervention. In the context of family planning and reproductive health, a gender-transformative approach entails not only improving women's access to key services and contraceptive methods but also helping communities to understand and challenge the social norms that perpetuate inequalities between men and women. It also involves engaging men and boys in ways that address their reproductive health needs and that support women's and girls' family planning and reproductive health decision-making

APPROACHES

WHO defines a gender-transformative approach as one 'that address the root causes of gender-based health inequities through interventions that challenge and redress harmful and unequal gender norms, roles, and unequal power relations that privilege men over women'

In comparison to gender sensitive, gender responsive has come to mean more than "doing no harm"; it means "to do better". It involves the proactive identification of gender gaps, discriminations, and biases and then the coordinated development and implementation of actions to address and overcome them, by advancing women's and girls' empowerment via enhanced access to and control of, for example, resources and services, benefits, participation and decision-making. Understanding and taking into consideration socio-cultural factors underlying sex-based discrimination. In application, gender sensitive has come to mean "do no harm".

10.14 FOOD AND GENDER

10.14 FOOD AND GENDER

Food is a basic human need, and the needs of men and women differ at different times in life. Various household characteristics, such as, household income, household consumption patterns, household's living condition, and tastes and preferences are the determining factors of individuals' nutritional standard in the family Maternal malnutrition in Pakistan is a persistent health issue and is the product of a number of complex factors, including adherence to food 'taboos' and a patriarchal gender order that limits women's mobility and decision-making. Those who are most acutely affected by rising food prices are the urban poor.

FOOD INSECURITY

Food insecurity is defined as a condition that exists "when people do not have adequate physical, social or economic access to food".In all countries and in Pakistan the level of food insecurity is profoundly impacted by the global food price crisis. The increased food prices prevent poorer groups from accessing an adequate amount of food

Food insecurity has important biological and social consequences, although the evidence is strongest for maternal and young child health. Studies identify a range of poor outcomes associated with the experience of food insecurity, which influence both psychosocial and physical health outcomes. There is a higher risk of common mental health seasonal weight loss, dietary change and overall poorer health among members of food insecure or food insufficient households

Issues of gender affecting food are paramount in Pakistani context. Although there has been considerable variation within the country and signs of national improvements, the country scores low on many traditional measures of gender equality including an unbalanced ratio of male to female school attendance, differential progression to secondary school, and consequently unequal rates of completion. Pakistan has been ranked 153rd out of 156 countries on gender inequality, according to the World Economic Forum's (WEF) Global Gender Gap Report 2021, released on Wednesday. Pakistan featured among the bottom 10 countries in two of the four sub-indexes: Economic Participation and Opportunity (152nd) and Health and Survival (153rd). These national level statistics are reflected in the everyday lives of young girls, who enjoy fewer rights and privileges than their male counterparts. Although more girls and women are now getting education but there are so many who still do not access to education or good food.

DIFFERENT NEEDS OF GIRLS AND WOMEN

Actually, girls need a better diet as they lose blood in the periods but In real life in many household boys and men get the best of the food stuffs. Inadequate nutrition for women and their children is the underlying cause of 3.5 million deaths around the world every year. Women in developing countries face micronutrient deficiencies, infections, the toll of heavy physical labor and other threats to their nutritional well-being throughout their lives.

Gender inequality also contributes to inadequate nutrition and food insecurity among women and children. For example, in many households in developing countries, women do not have the power to decide how food and other resources should be distributed among household

members, including their children and themselves.

Women need fewer calories than men, but in many cases, they have higher vitamin and mineral needs. Adequate intake of calcium, iron, and folic acid are of special importance for women.

Due to the hormonal changes associated with menstruation and child-bearing, women are more susceptible than men to weakened bones and osteoporosis For this reason, the average post-menopausal woman requires more calcium than her male counterpart (1000 mg for 51- to 70-year-old women compared to 800 mg for 51- to 70-year-old men). Recommended calcium intakes at other ages are the same for both genders.

Women also are at increased risk of iron-deficiency anaemia compared to men due to the monthly blood loss associated with menstruation. The average pre-menopausal woman needs about 18 milligrams of iron per day compared to 8 milligrams for men.

Both men and women need about 400 micrograms of the B vitamin folic acid, but the DRIs specifically recommend that all women of childbearing age take a multivitamin with at least 400 micrograms of folic acid to prevent brain and spinal cord defects in a growing fetus. These devastating consequences can occur in the early weeks gestation, before a woman even knows that she is pregnant. Once a woman is pregnant, the DRIs recommend 600 micrograms per day.

REASONS FOR POOR FOOD INTAKE

The reasons for poor food intake for women include women's lack of knowledge regarding bio-medically recommended pregnancy dietary requirements and adherence to traditional beliefs and practices that limit certain types of 'nutritious' foods

For example, In Pakistan humoral beliefs that classify foods as 'hot' or cold' are found to impact pregnancy eating practices. Pregnancy is understood to be a 'hot' condition where 'hot' foods should be avoided and 'cold' foods eaten. In most settings, adhering to these beliefs can lead to exclusion of highly proteinaceous foods s in Pakistan like fish.

An important factor for maternal malnutrition is the gender order in regions and provinces with patriarchal society, the subordination of women is systematically built into the societal structures.

Limitations on women's decision-making, dependency and mobility, as dimensions of the gender order, disables them from being involved in food provisioning .The practice of *purdah* is strictly adhered to in many areas in Pakistan and women are still 'deterred' from going out in public after dark as well as many other public "male" spaces during the day time, like the *bazaar*

*Many w*omen in Pakistan, particularly in rural areas, often have no control over how the household food budgets will be spent The gender order also disadvantages women through gendered food allocation that often privileges males an inequitable distribution of food that can begin in childhood. This leads to women's lifelong poor nutritional status, particularly when combined with multiple pregnancies and strenuous workloads

10.15 THE GENDER SYSTEM: MALE AND FEMALE INTERACTIONS

10.15 THE GENDER SYSTEM: MALE AND FEMALE INTERACTIONS

The gender equity framework is the only approach to involve men which closely reflects the spirit of the ICPD. It acknowledges the fundamental role men play in supporting women's reproductive health and in transforming the social roles that constrain reproductive health rights.

In order to analyze the hierarchical gender system in any given society one must begin with a basic assessment of social structure, that is, the major characteristics of social organization that govern social relations. In South Asia, the social structure is mostly man dominated, and is based upon male descent, authority, and power. As such, all children are born into the kinship group of their father, while females leave their group upon marriage and join the kin group of their respective husbands.

Adult males are ascribed formal financial responsibility for their parents (and anyone residing in the parental household) as well as their own households. Accordingly, males are the sole heirs to property upon the death of their father or other male relatives. In the rare occasions of divorce, the children remain with their father, and mothers must return to their parental household without financial compensation or sometimes rights of visitation with the children. Polygamy is socially sanctioned although generally only affordable by more prosperous households.

The asymmetrical social and economic structure outlined above has major implications for sex preference of children, cost and value of males and females to the household, capital investment in males and females (medical treatment, education, and nutrition), socialization processes, and many other aspects of behavior.

GENDER:

In most societies, being a man or a woman means not only having different biological characteristics, but facing different expectations about the appearance, qualities, behavior and work appropriate to being male or female. Relations between women and men -whether in family, the workplace or the public sphere also reflect understandings of the clients, characteristics and behavior appropriate to women and men. Gender thus differs from sex in that it is social and cultural rather than biological. Gender attributes and characteristics vary among societies and change over time.

Men have gender too:

Gender is often overlooked as an aspect of men's social identity. This stems from a tendency to consider male characteristics and attributes as the norm, with those of women being a variation on the norm. But the lives and activities of men as well as women are strongly influenced by gender. Cultural norms and practices about 'masculinity' and expectations of men as leaders, husbands, sons and lovers in other words, gender is important in shaping the demands on men and their behavior.

In many societies, they mean that men are expected to bear arms and fight in defense of the nation or community. They shape the expectation that men will concentrate on the material needs of their families, rather than the nurturing and care relationship assigned to women.

There are thus disadvantages and costs to men in patterns of gender difference.

Gender Equality:

Gender equality, or equality between women and men, consists of equal enjoyment by women and men of socially valued goods, opportunities resources and rewards. As what is valued differs among societies, a crucial aspect of equality is the empowerment of women to influence what is valued and to share decision-making about societal priorities and development directions. Equality will not mean that men and women become the same but that their opportunities and chances will not depend on their sex.

Role of men in achieving gender equality:

The achievement of equality implies changes for both men and women. More equal relationships will need to be based on a redefinition of the rights and responsibilities of women and men in all spheres, including the family, the workplace and society at large. One of the challenges in moving forward will be to motivate more men to participate as partners in the process of defining the visions and strategies for a more gender equal society.

Gender perspective helps understand men's situation:

This perspective on gender equality is concerned not only with the roles, responsibilities and needs of women compared to men but with the inter-relationships between men and women. This has led to recognition of men's gender identity specific health problems, needs and the conditions that shape them. For example, men are often exposed to greater risks than women of morbidity and mortality related to accidents, violence, and alcohol consumption. A gender perspective also highlights the rights and responsibilities of men in relation to child health, fertility regulation, and safe sexual practices.

Situations of Gender Differences:

Situations in which we see gender differences are:

Social:

Different perceptions of men's and women's social roles: the man is seen as head of the household and chief breadwinner, while the woman is seen as nurturer and caregiver.

Political:

Differences in the ways in which women and men assume and share power and authority. Men are more involved in national and higher-level politics, while women are more involved at the local level in activities linked to their domestic roles.

Educational:

Differences in the educational opportunities and expectations of girls and boys: Family resources are directed to boys rather than girl's education although girls can be streamed into challenging academic tracks.

Economic:

Differences in women's and men's access to highly paid careers and control over financial and other productive resources, such as credit, loans and land ownership.

10.16 GENDER AUTONOMY AND RIGHT TO HEALTH SEEKING

10.16 GENDER AUTONOMY AND RIGHT TO HEALTH SEEKING

Gender affects nearly all aspects of human life, here follows a review of how gender affects the health of men and women

GENDER, AND HEALTH CONCEPTS

The concepts of gender enable us to explain why women's health has received so little attention because it draws on the larger societal context in which men and women lead their lives. Women's lower status influences their health in many ways. Women's lower status in the family, where decisions regarding mobility and expenditures for health care are in the hands of men or older females, may prevent them from seeking care for their own health problems.

Some of the reproductive health problems are gender related i.e. lack of male involvement in realizing that child bearing and rearing are a joint responsibility of the couple, inequality in status of women in deciding to avoid unwanted pregnancies, sexually transmitted diseases, health and nutrition and neglect of female child.

The value of girl child

To both their family and society must be expanded beyond their definition as potential child-bearers and caretakers. It needs to be reinforced through the adoption and implementation of educational and social policies that encourage their full participation in the development of the societies in which they live. Leaders at all levels of the society must speak out and act forcefully against gender discrimination within the family, based on preferences. One of the aims is to eliminate increased mortality of girls, wherever such a pattern exists. Special education and public information efforts are needed to promote equal treatment of girls and boys with respect to nutrition, health care, education and social, economic and political activity, as well as equitable inheritance rights.

GENDER ASPECTS OF HEALTH AND HEALTH CARE

Gender And the Health / Ill-Health Of Individuals:

Women have significant and specific health concerns and needs in relation to the reproductive cycle. This is reflected in services for pregnancy and childbirth but continuing high rates of maternal mortality suggest the need to improve the availability and quality of antenatal, obstetric and postnatal services. There are other health conditions associated with reproductive biology that merit further attention, including women's greater susceptibility to iron-deficiency anaemia, and pregnancy-related exacerbation of malaria, tuberculosis and anaemia. Women are also biologically more susceptible than men to contracting sexually transmitted infections (STIs), with more severe consequences such as infertility and cervical cancer, particularly where treatment is delayed.

These biological aspects to women's health are also influenced by the socio-economic and cultural context. There are various different ways in which the health risks faced by individuals are influenced by their gender, by the socio-economic and cultural aspects of being male or female. For example:

Gender influences health through differences in personal autonomy:

Differences between women and men in personal autonomy and bargaining power within relationships puts women at risk of physical and sexual abuse and limit their ability to negotiate sexual practices that protect against STIs including HIV & AIDS.

Cultural practices:

There are a number of cultural practices observed in different parts of the world that have negative consequences for women. Child marriage and early childbearing increases the risk of pregnancy-related complications as well as limiting the social and economic opportunities of girls. Female genital mutilation, which is carried out in African countries, seriously affects women's sexual and reproductive health.

Working environment:

Men and women generally do different types of work and are thus exposed to different risk factors. In the household, smoke and gases associated with indoor cooking are serious hazards for women in many countries. In agriculture the division of labour may result in greater exposure of men to toxic substances such as pesticides. In the Industrial sector, women tend to be clustered in particular industries, such as garment factories and electronic assembly, which are also associated with specific risk factors that are different to those related to male-dominated sectors.

Risk of poverty:

Women face a higher risk of poverty than men, due to lack of access to economic resources (credit, land, inheritance, education, etc.) and lower remuneration (payments) for women's activities and occupations. Poverty and health have clear inter- relationship through impacts on nutrition, exposure to risks of unhealthy housing and unsafe water and sanitation, higher workloads, and generally on vulnerability to illness. Poverty is also a major contributor to sexual and reproductive ill-health.

Biases in food allocation:

In some societies, son preference (or daughter neglect) is associated with preferential allocation of food to boys and a tendency to invest more family resources in the prevention and treatment of illnesses of sons than of daughters. For girls, nutritional deficits in childhood can result in poor physical development and a higher risk of complications during childbirth. Unequal allocation of food can also be a factor in the health of adult women, with particularly negative effects during pregnancy and lactation when women's nutritional requirements increase. Biases for food allocation for female child during infancy, childhood, pregnancy and lactation period results in nutritional deficiency. This deficit leads to increased morbidity and mortality of females which can be reduced by proper counselling of the family about the importance of nutrition at each stage of life.

Gender and Access To Health Services: Access to health services is also effected by gender, for example, through:

- Finncial Cost: Families may be less willing to invest in obtaining health care for girls

and women. The lower average earnings of women may also limit their use of health services.

- Opportunity costs: Women's heavy workloads and multiple responsibilities for productive, household and childcare activities mean that the opportunity costs of seeking care may be high, particularly where services are distant, transport is problematic, or health centre hours are not structured to take account of women's schedules. Where services are perceived to be unresponsive to women's needs and concerns, or the quality of care is perceived to be low, the opportunity costs are correspondingly higher.
- Social costs: Socio-cultural constraints can include barriers to women travelling alone to health centres or being treated by male health care workers.

These are factors that need to be taken into account in structuring health care services. Issues that can be considered include the location and hours of services in relation to women's schedules, and the possibility of outreach services to reach women and girls who might otherwise have little access to care.

RELEVANCE OF GENDER TO HEALTH

Sex specific problems:

Women

- Pregnancy related complications
- Cervical cancer
- Menopause
- Maternal mortality
- Prolapse of the uterus
- Abortion which can have consequences like anaemia, infections of the reproductive tract
- Urinary incontinence

Men

- Prostate enlargement
- Prostate cancer / prostatitis
- Hemophilia

Different Prevalence of disease in men & women:

Problems with different rates of prevalence in men or in women are:

Women

- Anaemia due to iron deficiency linked to women's loss of iron during menstruation, pregnancy and lactation and exacerbated by cultural practices that

privilege men in intra- household distribution of iron-rich food;

- Osteoporosis (8 times more common in female), associated not only with biological factors but also with lifestyles
- Diabetes, hypertension and obesity conditions which are more frequent in women than in men, and also in lower income groups
- Depression (two to three times more common in female)
- Sexual violence in childhood, adolescence and adulthood
- Excessive mortality due to cancer.
- Varicose veins; urinary incontinence; arthritis; autoimmune disorders.

Male

- Cirrhosis, associated with alcohol abuse.
- Lung cancer, associated with tobacco consumption,
- Excessive mortality from violence, homicide and accidents, associated with stereotyped masculine attitudes and behaviours such as aggression, risk-taking, excessive consumption of alcohol.
- Silicosis, associated with mining work.
- Hernias;
- Color-blindness
- Coronary artery diseases.

Different characteristics:

Situations, conditions or problems which have different characteristics for men or women are;

- Risk for schistosomiasis is greater for those women who come into more frequent contact with contaminated water.
- Nutritional deficiencies can cause maternal deaths in childbirth
- Malaria during pregnancy is an important cause of maternal mortality due to development of chronic anaemia leading to spontaneous abortions and stillbirths.
- Sexually Transmitted Infections (STIs) are asymptomatic for longer periods and have severe consequences in women such as infertility and even mortality due to pelvic Inflammatory (PID) disease.
- Alcoholism and tobacco consumption have different health consequences for women, particularly during pregnancy.
- Sexual violence for women can cause unwanted pregnancy and STIs
- In some societies, sexual impotence has negative repercussions when it involves a male, than does sexual frigidity when it involves a female. Due to the importance given to male sexual power.

- Lack of access to quality water supply affects women more than men because in many societies they are the main users.

Biases by individuals / Family / Institutions:

Problems with different responses from the health in particular or society in general:

- Cardiovascular diseases are the major cause of death in men. In female after the menopause the ratio become equal.
- Disfigurement from domestic violence and acid throwing generates rejection by society if the sufferer is female.
- Domestic violence toward woman is judged differently from public violence against strangers. There is a greater degree of social tolerance for violence towards women from their male partners. This tolerance is reflected in legislation on family violence in almost every country.
- Focus of family planning services on women has excluded men, with the result that men have limited access to such services.
- Differences by sex in the quality of care in health services: research shows that the quality of care received differs between men and women, and that this difference is inequitable for women (waiting time, etc).
- Although maternal mortality results from women's biological capacity to give birth, the fact that women die in childbirth from preventable causes is clearly influenced by the women's value in society in general and the health sector in particular.

Gender difference of involvement in HIV & AIDS:

It is currently more prevalent among men. Research Shows that incidence of HIV is rising much more rapidly among women due to risk factors, degrees of severity of consequences, responses from society

Women are more vulnerable than men to HIV infection through heterosexual relations due to:

Biological Reasons

- **Semen is highly infectious:** HIV needs live cells in order to be transmitted. The body fluids richest in cells are the most infectious. As a result, semen is more infectious because it has greater cellular content than vaginal fluids.
- **Vaginal mucous membrane** is more vulnerable to infections than the penis.
- **Vaginal Tract:** Semen remains in the vaginal tract for a longer period than do vaginal fluids on the penis; as a result, women's exposure time to the virus is greater in heterosexual relations.
- **Age Factor:** Under 18 and above 45 years age is a factor that increases susceptibility to HIV because the vaginal mucous membrane in young women has not reached the full cellular maturity and after menopause is thinner and weaker and is more vulnerable to HIV.

- **Linkage of STIs with HIV & AIDS**: Women suffer more than men from sexually transmitted infections through heterosexual relations. In many cases STIs are asymptomatic in a woman, which impedes early detection and timely treatment.

Gender inequalities deprive women of their rights, autonomy and leadership and hence affect their life's prospects, specifically reproductive behaviours. This causes delays in achieving social and health targets .The four institutions of power (family, community, health care systems and the state) play an important role in determining the health status of women. Family traditions and customs govern the lives of women

The gender roles are repeated, and culture and religion are used in socializing girls and boys to these roles However, it is yet unclear why gender roles are reiterated, which mechanisms and processes society use to reinforce and naturalize them and what implications they have on women's personalities, lifestyles and health.

The genders inequalities in the health care system have direct effects on the health care-seeking behaviors. Inappropriate or delayed health care-seeking could lead to undesirable health outcomes, high fertility, unwanted pregnancies, medical complications, and amplified susceptibility to future illnesses among women. Survey reports and literature mainly provide information about married women that focuses primarily on reproductive health, particularly knowledge and practices related to family planning There is a dearth of information available on the lives of women as perceived by them with regard to their attributes, personality, desires, powers, responsibilities, risks, benefits, issues and problems.

There is a strong link between women's autonomy, rights, and health. This demands a gender sensitive and a, right-based approach towards health. In addition to service delivery interventions, strategies are required to counter factors influencing health status and restricting access to and utilization of services. Improvement in women's health is bound to have positive influences on their children and wider family's health, education and livelihood; and in turn on a society's health and economy

10.17 GENDER STEREOTYPE

10.17 GENDER STEREOTYPE

Gender Stereotype emerges from confusion between sex roles and gender roles. When it is believed that gender roles are based on biological differences rather than socially constructed expectations, the result is gender stereotypes. One example of a gender stereotype is the belief that women are shy and gentle because of their biology rather than because of societal expectations. Gender stereotypes categorize men and women according to rigid constructs and promote the belief that these differences are biological.

Common Gender Stereotypes:

Below is a list of common female and male gender stereotypes.

Women are:	**Men are:**
Dependent	Independent
Weak	Powerful
Incompetent	Competent
Less important	More important
Emotional	Logical
Implementers	Decision-makers
Housekeepers	Breadwinners
Supporters	Leaders
Fragile	Protectors
Fickle	Consistent
Fearful	Brave
Peace-makers	Aggressive
Cautious	Adventurous
Flexible	Focused
Warm	Self-reliant
Passive	Active
Followers	Leaders
Modest	Ambitious
Subjective	Objective
Soft-spoken	Out-spoken
Secretaries	Bosses
Nurturing	Assertive
Gentle	Strong
Patient	Impetuous
Cheerful	Forceful
Caretakers	Achievers
Cooperative	Competitive

10.18 REPRODUCTIVE HEALTH RIGHTS ARE HUMAN RIGHTS

10.18 REPRODUCTIVE RIGHTS ARE HUMAN RIGHTS

It is important to remember that the women's reproductive rights are not a luxury, they are basic human rights and all women should have their health and lives protected.

Following are the human rights as they relate to women.

The right to life:

Reduce the risk factors for high-risk pregnancies (too early, too late, too close or too many), Child's life should not be endangered by reason of his/ her gender, girl
Infants should be free from female infanticide.

The Right to Liberty and Security of the Person: Free from forced pregnancy, sterilization and abortion, free from sexual harassment.

The Right to Equality and to be Free from all forms of Discrimination: No discrimination in accessing:

- Healthcare services
- Equal access to education and information relation to Reproductive Health
- Appropriate nutrition and care throughout the life span ----Protection from all forms of violence
- Protection from discrimination in social, domestic or employment spheres by reason of pregnancy or motherhood.

The Right to Privacy: In Reproductive Health care services personal information remains confidential. Autonomous reproduction choices including choices relating to safe abortion.

The Right to freedom of Thought: Restrictive interpretations of religious texts, beliefs, philosophies and customs as tools to curtail freedom of thought on Reproductive Health and other issues.

The Right to Information and Education: Sufficient education / information to ensure decisions are made with full, free and informed consent. Full information on the relative benefits, risks and effectiveness of all methods of fertility regulation/prevention of unplanned pregnancies.

The Right to choose whether or not to marry and plan a family: The right to protection against a requirement to marry without the person's full, free and informed consent. Right to access Reproductive Health care services including those who are infertile, whose fertility is jeopardized by STDs.

The Right to decide whether or when to have children: Access to information, education and services for safe motherhood; access to widest possible range of safe, effective and acceptable methods of fertility regulation; freedom to use a method of protection against unplanned pregnancy which is safe and acceptable to them.

The Right to Healthcare and Health Protection: Right to comprehensive Reproductive

Health care including access to safe contraception safe abortion, diagnosis and treatment of infertility, STIs and HIV/AIDS. Girl child and women have the right to protection from harmful traditional practices. Right to appropriate services in connection with antenatal care, delivery, postnatal care. Adequate nutrition during pregnancy and lactation. Protection of health and safety in working conditions. Right to be accorded paid maternity leave with adequate social security benefits.

The Right to the benefits of scientific progress: Access to available Reproductive Health care technology related to infertility, contraception and abortion. Access to Reproductive Health care technologies, which are safe and acceptable.

The Right to Freedom of Assembly and Political Participation: Right to assemble and promote Reproductive Health and Reproductive Rights (RR). Right to form associations which aim to promote Reproductive Health and Reproductive Right to influence government to place a priority on Reproductive Health and Reproductive Right.

The Right to be Free from Violence, Torture and ill Treatment: All children have right to protection from sexual abuse, assault, harassment and prostitution. Women have right to protection from trafficking, domestic violence and sexual violence during armed conflicts, rape, sexual assault, sexual abuse and sexual harassment.

SITUATION IN PAKISTAN

Women's work roles in the household:

Women's domestic chores not only expose them to environmental hazards, they are also arduous with implications for their physical health status. In some communities women toil from morning till night, working on the fields, processing food items using traditional equipment, cooking, caring for children, fetching wood and water, etc.

All these make women very fatigued and leave them with little time to attend health centers for preventive care. Women are also reluctant to disorganize household organization and therefore suffer in silence when ill rather than take time off their domestic chores to seek treatment or be admitted to hospital for delivery, bed rest, etc.

Lack of autonomy IN women:

Women's subordinate role in society which in many communities involve female seclusion in the household, results in lack of autonomy by women. Women lack independent decision making, thus they cannot decide on their own to seek health care. Some time, they lack access to income earning opportunities and thereby have little access to money to meet costs of transportation to a health facility or treatment costs at a health facility. They depend on male relatives for funds.

Young women especially suffer from lack of autonomy, and this is a reason why a high proportion of maternal deaths (especially from abortion related causes) are of young women. In its extreme form, female seclusion restricts women's access to health care.

Child Marriage:

In remote areas at grass root levels the rate of child marriage is alarmingly high. As a result, young girls give birth to child at very early ages, which contributes to high maternal and infant mortality rate. In many parts of Pakistan, particularly NWFP and Baluchistan, girls are married off at young ages to much older men. Adolescent's pregnancy poses grave health risks to the young mother. A high proportion of teenage pregnancies end in either fatal complications affecting both foetus and mother or high morbidity among those young girls like vesicovaginal fistula (VVF), infections, etc. The constant leakage of urine and sometimes vaginal excretion of faeces turns victims into social outcasts, which results in divorce.

It is revealed that the majority of child marriage takes place with concealing of actual age of the bride and the bride groom. Therefore, emphasis should be laid down on birth registration of all infants as well as Registration of Deaths and Marriages, which would greatly contribute to decrease the rate of child marriage. As a result early pregnancy will automatically fall down and motherhood will be safe hence maternal morbidity and mortality rate will fall.

Education:

Although educational achievements have improved over the past twenty years, these generally remain below the expected level, especially for women and girls. The overall literacy rate is estimated to be 36 percent and the rural female literacy rate is below 25 percent. The female literacy rate in Pakistan is among the lowest in the world. Estimates of gross enrollment rates suggest that in Pakistan roughly half of all school age reflect widespread and long-standing weaknesses in social services, especially in primary education, health care and sanitation. Women suffer constraints because their mobility is restricted; they have little control over resources, limited decision-making power, and low level of awareness of their civil rights, a poor self-concept and limited aspirations. Very few families educate their daughters for gainful employment. Gender disparities exist in distribution of food, access to education, employment and health services. Less than 5% of Federal Government employees are women, mostly in subordinate positions and very few in decision-making posts.

- Millions of women, especially rural, who are uneducated, suffer from chronic poverty, remain ill fed and continue to suffer the consequences of uncontrolled fertility.

SECTION ELEVEN

SEXUAL TRANSMITTED INFECTIONS

11.1 RTIs/STIs, HIV & AIDS & HEPATITIS

11.1 RTIs/STIs, HIV & AIDS & HEPATITIS

Reproductive Tract Infections (RTIs) and Sexually Transmitted Infections (STIs) cause widespread morbidity and mortality in men and women, especially of reproductive age. Their prevalence is on the increase almost everywhere. STIs increase the transmission of HIV & AIDS and Hepatitis infection two to five folds hence these present as an important reproductive health issue.

The importance of an STI is determined by a number of different facts; how common it is; how rapidly it spreads; number of people infected; sexual behaviour of population; number of people at risk; the amount of acute and chronic disease caused; the resulting complications; the effect on reproductive health and the difficulty to control.

In most countries, STIs are under-reported, so there are many more sufferers than reported. The number of cases of STIs is increasing worldwide, particularly AIDS, a viral infection for which there is no cure. STIs which cause death such as AIDS are particularly devastating as they kill people at the time when they are most productive to society.

WWs HAVE AN IMPORTANT ROLE TO PLAY:

- STIs are common. They cause much suffering and disability. All health care providers have a responsibility to do, what they can about STIs. Reaching the people at greatest risk of STI is an important way to limit the spread of these diseases. Counselling for use of condoms can accomplish both purposes.
- Family Planning clients may seek advice about complaints related to reproductive tract. These could be signs of STIs or other reproductive tract infections. To help clients, FWWs should be able to recognize signs of STIs, to treat them promptly or refer for treatment.
- FWWs should be able to provide information about its prevention.
- FWWs should be knowledgeable about STI prevention and FP choices for high risk clients e.g., women who currently have or are likely to get an STI should not have an IUD.
- FWWs must be able to diagnose and treat known STIs before inserting an IUD.
- Identification of high-risk groups, like men and women who have several sex partners.
- FWWs should be able to help sex workers, who often contact them for family planning services. Dual protection should be highlighted.

The problem is not just in Pakistan. Worldwide over 250 million new cases of STI occur every year. There is no documented report of the magnitude of STI problem in Pakistan. But many STI patients are managed in the public sector. More than 80% of all gynaecological outpatients of all hospitals and female patients of lower health facilities report with the complain of vaginal discharge or lower abdominal pain. There are many reported cases of ectopic pregnancies and neonatal ophthalmia. These factors indicate that STIs are common in Pakistan. The STI control program is planning to conduct studies to document the magnitude of the STI problem in Pakistan. It is known that many STI patients not only seek

care from private sector but also get treatment from pharmacies or treat themselves. STI spread is faster because of asymptomatic patients as they can spread diseases without knowing they have it.

DEFINITIONS OF RTIs, STIs, HIV & AIDS, HEPATITIS AND REPRODUCTIVE TRACT INFECTIONS (RTIs)

RTIs are a group of diseases that cause infection of the genital tract and include Sexually Transmitted Infections (STIs), Non-Sexually transmitted infections and Iatrogenic infections.

Sexually transmitted infections (STIs)

STIs are contagious diseases usually acquired by sexual or genital contact and encompass diseases in addition to the RTIs. There is a clear distinction between the terms Reproductive Tract Infections (RTIs) and Sexually Transmitted Infections (STIs). RTIs include all infections of the reproductive tract, whether transmitted sexually or not. Bacterial Vaginosis or Candidiasis caused by a disturbance in the vaginal flora or PID caused by iatrogenic infection are examples of reproductive tract infections that have not been sexually transmitted. On the other hand, pathogens, which are commonly transmitted by sexual contact (Human Immuno Deficiency Virus, Hepatitis-B, C, D, etc) do not always or at all, cause an infection of the reproductive tract.

HIV Infection

HIV is an infectious disease, caused by Human Immuno-deficiency Virus (HIV), in which the body's defense / Immune system is destroyed resulting in the failure of the body to fight against infection. It thus becomes unable to resist many infections which the healthy body would cope under normal circumstances. The body also becomes vulnerable to attack from certain malignant tumours.

AIDS is a disease caused by HIV virus. AIDS is a systemic disease, not an RTI. The word AIDS means Acquired Immuno Deficiency Syndrome. The "syndrome" refers to a group of symptoms pertaining to different systems of the body which accompany a disease. Immunodeficiency" refers to the inability of the body's defense system to function. "Acquired" means that the condition is not inherited but the result of an infection that was not present before.

AIDS is a very serious STIs caused by HIV with no curative treatment or vaccine available, primary prevention is the only tool to control HIV & AIDS. Hence it is very important to know the mode of spread and the preventive measures and to identify and detect early, to counsel and refer patients for treatment and management. The time of progression of the disease without anti—retroviral therapy varies and can be up to nine to ten years. Due to long incubation period the person unknowingly can infect a large number of people. Although there is no cure, anti- retroviral treatment is available which can prolong the person's life and improve the quality of life. Thus, if HIV Infection & AIDS is suspected one should get laboratory tests done to confirm the diagnosis.

Hepatitis

Hepatitis is an inflammation of the liver, which makes the liver swell and stops it from its proper functioning. Hepatitis may be amoebic, iatrogenic or viral in origin. Several different viruses cause viral Hepatitis. They are named the Hepatitis A, B, C, D & E viruses. All of those viruses cause acute (short term) viral Hepatitis. The Hepatitis B, C & D viruses can also cause chronic Hepatitis, in which the infection is prolonged, sometimes lifelong. The hepatitis B & C are also transmitted sexually.

CLASSIFICATION OF RTIs

RTIs can be classified into the following three categories.

SEXUALLY TRANSMITTED INFECTIONS (STIs)

Sexually transmitted infection infecting the reproductive tract

These are caused by sexual intercourse. Examples of sexually transmitted diseases are given below:

Classification of STIs

BACTERIAL

- Gonorrhea,
- Chlamydia
- Syphilis
- Chancroid
- Granuloma Inguinale
- Bacterial Vaginosis

VIRAL

- Herpes genitalia
- Cytomegalovirus infection
- Warts
- Human immunodeficiency Virus & AIDs

PROTOZOAL

- Trichomoniasis FUNGAL
- Monilial Vaginitis OTHERS
- Scabies
- Pediculosis Pubis

Sexually Transmitted Infections not infecting the Reproductive Tract:

Some of the STIs might not cause infections of the reproductive tract. Following are the examples of some of such sexually transmitted infections:

- Hepatitis B, C and D
- HIV & AIDS

NON-SEXUALLY TRANSMITTED RTIs

These are RTIs that are not usually sexually transmitted. –
Candidiasis / Moniliasis or Yeast
Bacterial Vaginosis
Iatrogencially introduced PID

IATROGENIC

Iatrogenic infections introduced from outside due to inadequate aseptic precautions procedures in:

- Unsafe abortion
- Unsafe delivery practices
- Pelvic examination
- IUCD insertion

RISKS FACTORS FOR STIs

The most important factor affecting spread of STIs and AIDS is individual sexual behaviour and sexual behaviour of their partner (s)

Sexual behaviour -determines risk of getting an STI

- Having many sexual partners
- Changing sexual partners frequently
- Having sex with casual partners or prostitutes
- Some sexual practices such as anal sex

Health behaviour -which increase the risk of getting STIs

- Delay in getting STIs treatment
- Failure to bring in partners for treatment
- Not taking full treatment
- Not using condoms

Other Factors –

Such as social, demographic, economic factors influence sexual behaviour, thus increase risk. For example, demographic changes may result in greater number of men coming to

urban areas without their families, economic changes, both poverty and affluence, may affect whether men use prostitutes. Political instability, particularly war and insecurity, have an impact on sexual behaviour and rates of STI.

PEOPLE PRONE TO GET STIs

Anyone who is sexually active can get STIs and no one is immune to the infections. Individuals who are infected with STDs are at least two to five times more likely than uninfected individuals to acquire HIV infection if they are exposed to the virus through sexual contact. In addition, if an HIV-infected individual is also infected with another STD, that person is more likely to transmit HIV through sexual contact than other HIV-infected persons It is behaviour that creates the risk not age, sex, social status or job.

However, the following groups of people are more prone to get STIs & AIDS.

- Commercial sex workers
- Eunuchs
- Migrant workers.
- Long distant truckers/drivers
- Regimented personnel: Military, Police, Sailors.
- Street children prone to sexual abuse.
- Persons with multiple sex partners.
- Jail inmates.
- Drug abusers / Injecting Drug Users (IDUs).
- Blood recipients (unscreened blood or blood products)
- Frequent travellers
- Having direct contact with infected blood and other body fluids, such as vaginal, amniotic fluids, as a part of working at a health care facility, without practicing infection prevention.
- Getting pricked with needles or other contaminated sharp objects, cleaning up blood spills while not properly gloved and with open wounds
- Uncircumcised men are at a higher risk.
- Homosexuals
- Babies of mothers infected with STI/ AIDS.

PREVENTION OF RTIS & STIS

RTIs & STIs have potential to cause serious and permanent complications in persons, who are infected and not treated timely and effectively. All RTIs & STIs including HIV Infection & AIDS are preventable. The goal of STI control program is to reduce the rate of spread of infection and ultimately to prevent it. Targeting high risk people or people at risk is one cost effective strategy in controlling STIs. Other ways include increasing use of condoms, limiting

sexual partners, and decreasing the number of new cases by diagnosing and treating early.

Objectives of Prevention

The objectives of prevention of RTIs & STIs are to:

- Reduce the morbidity and mortality due to RTI & STI e.g., prevent development of serious complications such as PID, infertility, ectopic pregnancy, stillbirth and congenital abnormality, blindness of neonate etc.
- Prevent further spread of STIs & RTIs.
- Reduce the risk of HIV & AIDS.

The incidence of RTIs STIs and HIV & AIDS can be reduced through two types of prevention:

Primary Prevention

Primary prevention or prevention of infection in the first place can be achieved through:

- Creating health awareness (public education campaigns) by mobilizing all public education channels, so that young people, women and men can have access to all information about sexuality and the causes, dangers, prevention and care of RTIs & STIs
- Encouraging safer sexual behaviours like:
- Sex with mutually faithful partner
- Correct and consistent use of condom
- Abstinence
- Provision of good quality condoms at affordable prices.

Secondary Prevention

Secondary prevention or prevention of further transmission from an infected person aims to provide accessible, acceptable and effective services for early diagnosis and treatment of RTIs & STIs. Secondary prevention of transmission of RTIs & STIs may be achieved through:

- Providing non-stigmatizing and non-discriminatory health management
- Providing quality RTIs& STIs care through syndromic case management.
- Provision of accessible, acceptable and effective services, which offer diagnosis and treatment for both symptomatic and asymptomatic patients with STIs and their partners.
- Ensuring a continuous supply of highly effective drugs and condoms.
- Providing skilled health care providers for comprehensive management of RTI & STI syndromes with special emphasis on counselling.
- Examining women attending clinics for maternal and child health care and family planning even if they are asymptomatic.

- Contact tracing - tracing and treating contacts of the persons infected with STIs.
- Education, investigation and treatment of targeted population groups, i.e. Those who have placed themselves at risk of infection, e.g., sex workers, long distance truckers, migrant workers, frequent travelers, regimented personnel, youth in and out of school / college, etc.

Prevention Steps by Health Care Providers

All health care providers, including family planning providers, can do something to prevent STIs. Some ways to fight STIs are listed here. Programs and providers can choose ways that fit their resources for their clients' needs and provide services or referral.

- Create awareness about STIs.
- Routinely tell clients how to prevent STIs and how to know if they have an STI. Distribute relevant IEC material.
- Encourage people to seek care if they suspect infection or if they develop symptoms, and tell them where to find services.
- Ask relevant questions to find out if clients are likely to get an STI.
- Encourage people who might get STIs to use condoms even if they also use another family planning method.
- Make condoms available free, if necessary.
- Learn which STIs are common, know the symptoms, and recognize them among clients in their area.
- Diagnose and treat them. Otherwise arrange for referral.
- Know and use infection-prevention techniques in the clinic because many STIs spread by body fluids, especially blood.
- Help educate the community. Mass media and Interpersonal Communication Programs can help clients to recognize their risk and change their sexual behaviour. They also encourage people to seek treatment.
- People who might get an STI need to know:
- The common signs and symptoms of STIs,
- Where to seek care if symptoms appear
- Protect their sex partners by avoiding sex (if symptoms appear) until the STI is treated or at least practice safe sex.
- People can avoid STIs by changing their sexual behavior

They can follow any of the ABCs –

1) Abstain from sex. This is the only guaranteed protection
2) Be mutually faithful, Aaways have sex with the same person and This person also must not have sex with anyone else and must not have an STI.

3) Consistently Use Condoms, Use them every time and use them correctly.

To prevent STIs, people at risk should use condoms even when they use another family planning method.

IMPORTANT: you usually cannot tell if a person has an STI just by looking at him or her. People with STIs, including HIV & AIDS, usually do not look sick.

CASE MANAGEMENT OF RTIs, STIs, HIV & AIDS and HEPATITIS

Comprehensive RTI & STI case management is not limited to reaching a correct diagnosis and providing therapy. It also aims at contact tracing, reducing and preventing future risky behaviour and at ensuring that sexual partners are appropriately managed and treated. Remember to behave professionally with both male and female patients throughout the process of case management

STEPS OF CASE MANAGEMENT

HISTORY TAKING

During history taking and examination of a RTIs / STIs patient, it is very important to win the patient's trust and confidence so as to be able to obtain all necessary information in as short time as possible. The consultation should take place where audio and visual privacy can be assured to the possible extent. If necessary, the provider should speak alone, if possible, with the client so that the client can speak openly without being overheard. Service providers should always remember to maintain a respectful and nonjudgmental attitude towards their client / patient.

History taking and examination are particularly two very important skills in Syndromic diagnosis of RTIs& STIs cases. This will enable the service provider to decide which flow-chart to use and treat the patient appropriately.

The Following four sets of information are needed

- General history
- Medical history
- History of Present Illness
- Sexual History

The best sorts of questions for history taking are both closed and open-ended questions.

General history

- Name
- Age
- Address
- Occupation

- Partner's occupation.
- Marital status
- Number of children
- Pregnant / lactating (for women)
- Contraceptive use

Medical history

- Any past STI
- Other medical problems
- Medicines use
- Drug allergy

History of Present illness

- Complaints
- Duration
- How did it start?
- Any Iatrogenic infection introduced from outside by unsafe abortion, poor delivery practices, pelvic examination or IUCD insertion.
- Focus on the syndromes and ask specific questions as described after each flow chart

Sexual history

- Currently sexually active
- New partner in the last three months
- Assessment of patient's risk level
- Risk assessment for female with vaginal discharge

The five 'Ps' of Sexual history

- Partner (Spouse)
- Prevention of Pregnancy
- Protection from STIs/RTIs
- Practices
- Past history of STIs/ RTIs

Partner (Spouse): When assessing sexual risk, it is important to determine the number of sexual contacts a client has had. If the client has had multiple contacts, there is a need to explore for specific risk factors such as other contacts, injecting drug use, history of STIs, and drug use with sex. If the client has one spouse, the service provider should ask about the

length of the relationship and the spouse's risk such as other contacts and injecting drug use.

Prevention of Pregnancy: Based on the partner information from above, the service provider can determine if the spouses is at risk of becoming pregnant. If this is the case, the service provider should determine if the pregnancy is desired.

Protection from STIs/RTIs: Through discussion, the service provider should explore different issues such as condom use, monogamy, client self-perception of risk, and perception of spouse's risk.

Practices: If the client has had more than one spouse in the past year, the service provider may want to further explore the client's further sexual practices and condom usage. Asking about other sex practices will guide risk reduction strategies and help in identifying anatomical sites from which to collect specimens for STIs testing.

Past History: A history of gonorrhea or chlamydia increases a persons' risk of repeated infection. STIs in the recent past indicate a high-risk behavior.

EXAMINATION

Physical examination is important because it helps the service providers to confirm the diagnosis

Pelvic Examination

Examination of female patients for STI syndromes:

- Ask the patient to remove her clothing from the chest down, and then lie on the couch.
- Cover the parts of the body, which do not require examination.
- Ask the patient to lie down in lithotomy position.
- Inspect to confirm the syndrome or detect other RTIs & STIs. Note any discharge, rashes or ulcers.
- Examine the vulva, anus and perineum.
- Palpate the inguinal region to detect the presence or absence of enlarged lymph nodes and buboes.
- Palpate the abdomen for pelvic masses and tenderness,
- In case of lower abdominal pain do not forget to check for guarding and rebound tenderness, while palpating.
- Speculum examination; Perform speculum examination and look for the origin and nature of the discharge. Swab the cervix with clean gauze and wait for 1-2 minutes to see if any discharge comes out from the OS and for cervical friability.
- If possible take a High Vaginal Swab for culture sensitivity
- Conduct a vaginal or bi-manual examination and note any cervical tenderness on movement.

COUNSELLING

People who seek treatment for a suspected STI constitute a very important target group for education and counselling for prevention of STI & AIDS. Those who are actually diagnosed to have RTI / STI may be more receptive to advice. They now have proof that it can happen to them, not only to others. This is a valuable opportunity to communicate with them about the risk of HIV & AIDS infection and how to avoid future STI infections.

DIFFICULTIES IN COUNSELLING

Counselling is difficult area of RTI & STI management for both patients and service providers. Because of the stigma attached to RTI & STI, patients are embarrassed to talk about their problems. They have difficulty in relating their sexual behavior, may not have heard about the disease they have acquired or have been partially treated by quacks or by service providers who branded them as sinners, refused to provide treatment, discussed their personal information in public waiting areas, or humiliated them.

Counselling can also be difficult for service provider. Most service providers have very little time, are untrained in human sexuality, uncomfortable talking explicitly about sexual behavior, and bring their own moral, religious, and cultural values and experiences to the treatment room.

Therefore, major barriers to RTI & STI counselling are:

- A judgmental attitude of the service providers that stems from difference in values, opinions and beliefs.
- Issues of privacy and confidentiality
- Difficulty in discussing sexual behaviour

The FWWs attitude should be unbiased, non-judgmental, and non-discriminatory. She should maintain utmost confidentiality and exhibit empathy and active listening skills. Confidentiality and unbiased attitude of the service provider are the key to successful counselling in STIs, RTIs, HIV & AIDS and Hepatitis.

The Four Basic Health Education Messages (4 Cs) of STI Counselling

In syndromic management of RTI / STI, the following 4 Cs are must for counselling the patients and/or their partner(s):

- Compliance with treatment
- Counselling for prevention
- Condoms - correct and consistent use
- Contact / Partner Management (tracing, counselling, treating & notifying)

There is no standard order in which these messages should be delivered. However, patient tend to be most responsive to messages related to their own cure, followed by the treatment of those close to them, for instance a spouse. There is often a lack of interest to discuss the long-term consequences of STI, especially the risk of acquiring or transmitting HIV & AIDS

and the behavioral changes required for preventing its spread.

Compliance with treatment is CRUCIAL

1 Reasons for non-compliance:

- Patient does not understand the instructions
- Treatment schedule is too complicated
- Drug(s) are too expensive: patients may not want to purchase the full treatment or may save some for 'next time'.
- Symptoms have resolved so patient stops treatment
- Unpleasant side effects.

2.Ways to improve compliance

- Give all necessary instructions for the patient in a way the patient can understand and remember till the completion of the full course of treatment. Disappearance of symptoms in the middle of the treatment does not mean that the patient is cured.
- Write down the instructions in detail and give it to the patient. Ask the patient to repeat the instructions.
- Use symbols for those who cannot read.
- To avoid re-infection from partner or transmitting the infection to partner, the patient should avoid sexual contact during the treatment and till the partner is treated or at least practice safe sex.
- Ensure follow-up visit if the patient is not cured after taking the full course. After completion of the treatment, if the patient feels that he / she is cured, then there is no need to bother him/her for a follow-up visit.
- Discuss any potential compliance problem such as multi-dose, multi-drug schedules, drug cost and potential side effects.

Counselling for prevention

Counselling of RTI & STI patients involves a whole range of skills from listening to their problems, giving them vital information & helping them to solve their problems. Counselling can be done in a group or individually. Counselling aims at helping patients bring about changes in those attitudes and behaviors that may put them and their partners at risk. Education involves giving patients practical information about the RTI & STI problems and their management. It also involves helping patients understand how RTIs & STIs spread, why it is so important to treat them and how they can protect themselves, their partners and children in future.

Counselling and education are crucial to the success of syndromic management of RTI & STI. It is important to counsel every patient who visits a health facility for RTI & STI treatment, or prevention. The service provider has an excellent chance to help the patients to reduce their risk of getting other RTIs & STIs including HIV & AIDS or spreading those to other people. Since the patients are suffering, they will be interested in the information; on the other hand, they may not be interested once the acute stage of illness is over. It may be one of the

few opportunities for the service provider to break the cycle of transmission of RTI & STI in community. Good RTI & STI counselling should include-"WELL" method of communication to make RTI / STI clients comfortable and let them know that we want to help them

"WELL"

W - Welcome your clients; Greet your clients warmly and offer them a seat. Sit close enough to them so that you can talk comfortably and privately. Have a welcoming tone in your voice. Speak to your clients, as you would speak to your friends.

E - Encourage Your Clients to Talk; You can encourage your clients to talk by looking at them as they speak, by asking questions, by nodding as they speak, by saying 'mmm, Hmmm' or 'tell me more about that', etc.

L - Look at Your Clients; Looking at your clients as they speak helps them to talk comfortably. Make sure your facial expression is warm and friendly. Smile while listening / talking.

L - Listen to Your Clients; Listen carefully to what your clients have to say. Give encouragement to show that you are interested.

Components of STI Counselling:

- **Inform**: Keep one well informed to be able to provide good treatment and accurate information to the patients.
- **Understand:** understanding the feelings, experiences and point of view of the patients including barriers to change.
- **Show respect**: respect the confidentiality and dignity of the patients; providing privacy for the patients.
- **Overcome discomfort about sexuality**: Trying to become comfortable with one's own sexuality, with sexual behaviour and with sexual words. Feeling at ease while talking about a sexual matter allows the patients to communicate better with the service provider.
- **Decision-making aid**: helping patients take decision for solving their RTI/ STI problems.

Every patient suffering from STI must receive and understand the following messages:

- Sexual contact is the usual cause of the disease. (The mode of transmission of STI including HIV & AIDS).
- STI augments the risk of HIV & AIDS transmission.
- Without treatment STI may cause severe complications.
- The mother of the baby with Neonatal Conjunctivitis should know that she is source of her baby's infection.

STEPS OF COUNSELLING RTI & STI PATIENTS

- Inform the patient about his / her RTI / STI, its implications and treatment
- Assess the patient's risk level
- Inform the patient about his / her risk level
- Help the patient trace his / her sexual partners.
- Help the patient plan changes in his / her behavior.
- Identify any barriers to changing risky behavior.

INFORM THE PATIENT ABOUT HIS/HER RTI/STI, ITS IMPLICATIONS AND TREATMENT

Through informing, the patients need to understand how to get over their current RTI / STI and prevent getting another one in the future. Counselling is about helping patients to make changes in their attitudes and behaviour that may be putting them and their partners at risk.

The six vital messages regarding information about STIs should be provided to these patients as follows:

Practice Safe Sex: Stress the importance of using condoms and limiting the sexual practice to a single partner.

Get STI treated: Cure the infection. Stress importance of adhering to the treatment regimen completely. Warn them that the symptoms may come back if they do not take all their medications for the prescribed period of time. Explain to the patients that if they still have symptoms, it would mean that they need treatment for a longer period of time.

Do not Spread STI: Beware of spreading STI including HIV & AIDS. Encourage patients not to have sex again until they have taken all their medication as directed and have no more symptoms. Warn them that if they do not wait, they may transmit a STI including HIV & AIDS to their sexual partner. Also warn them not to have sex otherwise there are increased chances of re-infection. Promote use of condoms.

Encourage Partner Treatment: Help their sexual partner get treatment, as he or she may be the source of infection and cause recurrent infections for the patient and others.

Get regular Follow-up/ Check-ups: Emphasize the importance of follow-up, to make sure that the infection is cured as there are conditions where the infection is asymptomatic and acts as a source of infection to others and reactivation of infection in the patient.

Protect the unborn baby: Protect the baby by regularly attending antenatal clinics to get a physical examination

ASSESS THE PATIENT'S RISK LEVEL

Because family planning clients usually are sexually active people, they need to know about:

- Risk of getting STIs

- Prevention of STIs
- Recognizing STI symptoms
- Treatment of STIs

Risk Assessment for STIs in Female Patients

Risk assessment has been incorporated, as part of the diagnosis, in the flowchart for symptomatic women, in order to increase their sensitivity to diagnose Cervicitis. The probability of acquiring a STI by a woman is greater if her risk assessment is positive. Since 70% of the women remain asymptomatic, it is more important to assess risk in women. The risk assessment questions are based on the recommendations of an expert panel. Although they have yet to be validated, they are considered the most appropriate.

Common myths about RTIs, STIs and AIDS include:

- Married women, young girls and boys, clean, healthy or elderly partners are usually free from infection.
- Taking antibiotics and anti-malarial drugs before or after sex is protective
- Urinating, washing or douching after sex provides sufficient protection.
- I don't belong to a high-risk group (sex workers, truck drivers, homosexual) so I'm safe.

INFORM THE PATIENT ABOUT HIS / HER RISK LEVEL

Counsellor's job is not to change patient's behaviour directly but to give information about her / his risk level, identify any barriers that might interfere with his / her attempts to change and to help deal with those barriers. It is critical to find a balance between fear arousing and fear reducing messages.

HELP THE CLIENT TO TRACE HIS / HER SEXUAL PARTNERS.

Always tell the patients how important it is to treat the partner(s). Ask them how they can be helped to bring their partners for treatment. Clients are the index case: the only one who can tell, where the infection came from.

HELP THE PATIENT PLAN CHANGES IN HIS / HER BEHAVIOUR

There are a number of techniques to help the patient change his/her behaviour. Focus on

- The immediate benefits to the patient.
- Replacing a risky practice.
- Safer sex
- Knowing the signs and symptoms of RTI & STI and treating them promptly.
- Seeking treatment for drug addiction.
- Avoiding any body piercing, (involving the use of shared instruments).

- Seeking health care at a facility where needles and skin piercing instruments are properly sterilized.
- Helping the patient to deal with any barriers.

IDENTIFY ANY BARRIERS TO CHANGING RISKY BEHAVIOR

Changing risky sexual behaviour is difficult because it is extremely personal, private and satisfying. It is formed by a combination of different factors like, physical structure, gender, culture, religion, economic background, character, principles, personal factor and environment. Most sexual activities are habitual. It is necessary to understand the patient's sexual behaviour if we want to bring a change in risky behaviour. Therefore, counselling should be tuned to suit the patient's nature and behaviour.

Condoms – correct and consistent use

Correct and consistent use of condoms should be encouraged in STI patients in order to minimize the spread of RTI & STI

Advantages

- Prevents RTI & STI including HIV & AIDS
- Prevents unwanted pregnancy
- Give feeling of security.
- Shows care for partner
- Saves the cost and embarrassment of seeking treatment for RTI, STI
- Slows down ejaculation and thereby prolongs pleasure.

Disadvantages

- Requires advance planning
- Can tear or slip off
- Costs money
- Slows ejaculation
- Lessen pleasure
- Can cause allergy to few individuals.

Reasons for not using condom:

Men in general do not like condoms and usually come up with many excuses and reasons for not using them

- Dislike for condoms
- Problem of condom accessibility, availability or affordability
- Difficulty in raising the subject of condom use in a relationship or negotiating its use

- Unfamiliarity with the condom and its correct use.

The patient should be advised

- NOT to use condoms, which are dry, dirty, brittle, discolored, sticky, melted, damaged or past their expiry dates.
- NOT to reuse condoms.
- To store a supply of fresh condoms in a cool, dry place, away from sunlight, moisture and heat.

Ways to Increase Condom Use

- Educate the patient about the advantages of condom use.
- Ensure that a patient is familiar with the appearance, the texture and the correct use of a condom (open a condom package, allow the patient to feel how thin it is and demonstrate correct use).
- Counsel the patient about where he / she can obtain/purchase quality condoms.
- Make helpful suggestions on how the patient can raise the subject of condom use or negotiate its use in a way appropriate for that relationship.
- To minimize the spread or transmission of RTI, STI or HIV & AIDS, in future it is important to educate all clients to use condom correctly and consistently.
- Therefore
- Every client should be given a demonstration on correct use of condom correctly

Clinics should have provision of supplying condoms to the client continuously.

Contact / partner management

Partner management means tracing, counselling, treating, and notifying all the sexual partners of a patient treated for RTI, STI. It is one of the key steps in RTI, STI management and is essential once a patient has been diagnosed to have RTI, STI.

Partner management is important

The patient should be made aware of how important it is to have his / her partner(s) treated, because the patient will be at risk of re-infection until his / her partner(s) are not treated. On the other hand, the patient him / herself could have infected his / her sexual partner(s). Inability to trace the sexual partners will result in further spread of RTI, STI and re-infection of partner and patient. All the sexual partners of the patient must be counselled and if necessary, examined and treated for RTI, STI. Partner management is also important to detect and treat the asymptomatic RTI, STI cases that do not seek treatment separately specially the females.

Principles of Partner Management

Confidentiality:

The partners should be notified in confidence and all information provided by him / her should remain strictly confidential. The most serious obstacle in contact tracing and notification is the patient's fear of losing confidentiality.

Voluntary:

The index patient should receive all the treatment and counselling he/she needs, irrespective of his/her willingness to help the service provider trace the partner. The index patient may identify his / her partner but may refuse to give consent for provider contact. In such cases, one has to counsel repeatedly. In extreme cases, index patient may get the medicine and other necessary information for the partner.

- RTI, STI diagnosis and treatment services should be available to all partners.
- There should be no discrimination amongst patients. Diagnosis or treatment of RTI/STI can lead to stigmatization and discrimination for the patients or their partner. Care should be taken to respect the dignity and confidentiality of both index patient and the partner(s).

PARTNER NOTIFICATION:

Approaches to Partner Notification:

There are two major approaches to partner notification:

Patient referral.

In this approach which is recommended by WHO the index patient notifies the partner(s) for possible infection without direct involvement of the service provider. In most countries patient referral is the most feasible approach because it involves fewer personnel, is inexpensive and does not require identification of sex partners. A partner notification card with diagnostic code should be given for every case.

Date:_____ Serial Number: _____

Please come to:_____clinic.

Along-with the card.

(Clinic hours: 08:00 am to 03:00pm)

Diagnostic code: _____

Sample of partner notification card

Provider referral.

In this approach the service provider notifies the patient's partner(s) through issuing appropriate 'partner notification card'. The information provided by the patient is used confidentially to trace and notify the partners directly. This method needs professional staff trained in communication skill, demands more time, is expensive and may be viewed by the patient as a threat to his / her confidentiality.

To ensure confidentiality, various diagnostic codes are used in the partner notification card for tracing and treating partners of respective STI patients.

Priority groups for Partner notification:

All efforts should be made to treat the wife or female partner of male patients on a priority basis as:

- Women are frequently asymptomatic
- Unaware of their infections,
- Serious potential complications,
- Grave consequences.

Treating Partners:

Other possible ways of partner management

- Dispensing appropriate drug for the partner.
- Trying to bring the partner to the clinic.

Code	Syndrome of Index Patient	Treatment of Partner
UD	Urethral discharge	Treat partner for Cervicitis.
GU	Genital ulcer	Treatment of Partner for Genital Ulcer
VD	Vaginal Discharge: Patient treated for Vaginitis & Cervicitis. Patient treated for Vaginitis only.	Treat partner for Urethritis. Not necessary for the partner to be treated
PID	Pelvic Inflammatory Disease	Treat partner for Urethritis
Code	Syndrome of Index Patient	Treatment of Partner
SS	Scrotal swelling	Treat partner for Cervicitis
IB	Inguinal bubo	Treat partner for LymphogranulomaVenereum
NC	Neonatal conjunctivitis	Treat mother for Cervicitis and her partner(s) for Urethritis.

The chart confirms the treatment of the partner respective to that of the index patient.

COMPLICATIONS OF STIs

STIs cause serious acute diseases ranging from urethral discharge to painful sores. The consequences of STIs can be devastating. Infants, infected at birth, with blinding eye infection or pneumonia; women suffering chronic abdominal pain, ectopic pregnancy, or infertility; and men with infertility. Syphilis can kill infants, and it kills adults as well, sometimes years after the initial infection. Indirectly, STIs also kill through spontaneous abortion, ectopic pregnancy, and cervical cancer.

STIs and their sequelae are costly to individuals and the health care system. Many people with STIs seek help from private or traditional providers, where they may pay one-quarter to one third to of their monthly earnings for prescriptions and drugs. Also, STIs reduce the productivity of men and women in the prime time of their lives. For example, in urban areas of sub-Saharan Africa with prevalence of STIs, syphilis causes the loss of an estimated 9 productive days per capita per year for the entire urban population. Clinics and hospitals must therefore devote their time and resources to patients with STIs.

The greatest impact of RTIs, STIs is on women and children. Though males are also affected they tend not to suffer from the serious and life-threatening consequences. In women between 15 and 49 years of age, the morbidity and mortality due to STI, excluding HIV & AIDS, are second only to maternal causes. In addition to the pain and discomfort associated with acute illness, women often experience long-term impairment of their reproductive health.

STIs increase the incidence of:

- Urethritis, cervicitis, salpingitis and PID.
- Ectopic pregnancy.
- Spontaneous abortion
- Infertility (in both men and women).
- Epididymitis (in men)
- Urethral stricture in men.
- Cervical cancer.
- HIV & AIDS infection.
- HIV & AIDS transmission.
- Death due to sepsis, Ectopic pregnancy and cervical cancer.
- Neonatal conjunctivitis, if untreated, results in blindness.
- Chlamydial pneumonia in newborn and infants.
- Newborn congenital malformation.
- Mental retardation.
- Premature birth
- Low birth weight babies
- Foetal death

11.2 SITUATION ANALYSIS

11.2 SITUATION ANALYSIS

The factors that determine health behaviors in Pakistan may be seen in various physical, socioeconomic, cultural and political contexts. Religious and social ethics discourage open discussion of sexual matters. The low social status of women limits their economic options, and women may exchange sex for money or other forms of support Generally there is minimal information or awareness among the public about STIs, a fact which has been proven in many studies. However, most of the people are aware that STDs can be prevented by protection and most of them knew about the condom. HIV and Hepatitis are better known diseases, probably due to more media attention. Socioeconomic and educational status makes a difference to the knowledge about STIs.

Control of STI is difficult because sex is embarrassing and often difficult to talk about. People may be shy to ask for information they need, reluctant to come for treatment and hesitant to tell their contacts. There may be shame and stigma associated with having an STI. Talking about sex can make people uncomfortable and may be a taboo.

Poor health services offer little for the prevention and treatment of STIs. Various factors, including proximity, affordability, availability, family pressure and strong community opinion, lead to self-care and consultation with traditional healers, *hakeems* or even quacks Long-held misconceptions continue to contribute to the national neglect of STI treatment and prevention.

Any behavioral change is usually difficult. Knowledge does not automatically lead to change in behavior. The difficulty in controlling STI lies in the fact that sex is a primary and deep-rooted drive. Who people are and how they feel about themselves, is one of the basic instincts ensuring their survival as a specie and is therefore, particularly deeply oriented. Sexual behavioral, being very personal and deep rooted, is thus even more difficult to change.

The close association of sexual behavior with the use of drugs such as alcohol complicates control. Similarly, the asymptomatic carriers, who can spread the disease without even knowing that they have it, complicate the treatment programs.

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The close association of sexual behavior with the use of drugs such as alcohol complicates control. Similarly, the asymptomatic carriers, who can spread the disease without even knowing that they have it, complicate the treatment programs. A 2008 study conducted in six urban cities of Pakistan found a prevalence of 4.4% for at least one of the five STIs among men from the general population.[7] Higher rates of infections — 60% among Hijras and 36% among male sex workers — have been found among members of at-risk groups.

Effective control of STIs depends on both public health and individual factors. STI care-seeking appears to be similarly distributed and is provided by medical and non-medical practitioners, including traditional healers, homeopaths, quacks and some specialised STI NGO clinics. Despite the fact that STI care is predominantly provided in the private sector, most STI management and training resources by the government or donors remain largely focused on public-sector providers. Finally, regardless of who provides the care, there is little monitoring of the quality of care, prevention counselling, condom promotion, treatment of partners to reduce the spread of STIs, and referral for complicated or resistant cases

In Pakistan, as in many other low-income countries, case management for STIs is usually sub-optimal due to rampant personal empiricism and inappropriate practices.The situation is exacerbated by the absence of STI surveillance, resulting in the lack of data to accurately estimate the burden of STIs, detect incident cases or monitor patterns, follow up treatment outcomes or establish programmes to detect asymptomatic cases - leading to many missed opportunities for effective case management and prevention.

Other aspects which make control difficult are the resistance of some bacterial STIs to antibiotic, especially gonorrhoea and the lack of treatment for viral STIs. Resistance requires changes in the drug of choice and use of increasingly expensive drugs to achieve control.

General awareness about this group of diseases is low, and patients remain undetected, as they do not report to the appropriate health outlets. Besides this the laboratory facilities are also limited which further reduce the chance of an early diagnosis although now the syndromic approach is recommended by WHO and is being used for treatment of STIs. The lack of proper treatment facilitates the spread of STIs, some of which cause serious complications and even death.

11.3 GENERAL DESCRIPTION OF COMMON RTIs AND STIs

11.3 GENERAL DESCRIPTION OF COMMON RTIs AND STIs

Common RTIs and STIs are classified into two groups according to symptoms, such as Discharges and ulcers. Following are the general descriptions of the common RTIs and STIs

ABNORMAL GENITAL DISCHARGES:

CANDIDIASIS / MONILIASIS OR YEAST

Candidiasis or Moniliasis is caused by Candida albicans, a kind of yeast like fungus. Usually Candidiasis /Moniliasis is not sexually transmitted. Pregnant women, women taking oral contraceptive pill or women suffering from diabetes are at increased risk of this disease.

Signs / Symptoms Female

- Vaginal discharge: Moderate, white, thick or curd-like
- Itching: Moderate to severe in the vaginal orifice and surrounding area
- Dysuria and dyspareunia are commonly present
- Swelling and redness in the vaginal orifice and vaginal canal.

Male

- Usually asymptomatic
- In some cases transient rashes, discomfort and itching in the penis
- Infection is self limiting

BACTERIAL VAGINOSIS

Bacterial Vaginosis is one of the most common infections of the vagina. It is caused by overgrowth of GardnerellaVaginalis, Mycoplasma hominis or anaerobic organisms. Generally Bacterial Vaginosis is not a sexually transmitted infection.

Signs / Symptoms

- Vaginal discharge: thin, grayish white with fishy foul smelling odor.
- Usually not associated with abdominal pain, pruritis or dysuria.

TRICHOMONIASIS

This is one of the most common vaginal infections of women and is caused by a single cell parasite called Trichomonas Vaginalis. It is mostly sexually transmitted.

Signs / Symptoms Female

- Vaginal discharge: profuse, frothy, greenish-yellow and often mal-odorous
- Itching: in one-half of the patients and is often severe.
- Sometimes associated with dysuria and dyspareunia.
- Swelling and redness in the vaginal orifice and vaginal canal

- May be asymptomatic too.

Male

- Usually asymptomatic
- Dysuria in less than one quarter of men
- Discharge is scant and clear
- For most men it is self-limiting

GONORRHEA

Gonorrhea is caused by the bacteria known as Neisseria gonorrhea and is one of the most widely known STI. In women, if not treated in its primary stage, the infection may spread to the cervix, uterus, ovaries, fallopian tubes and other pelvic organs causing 'Pelvic Inflammatory Disease (PID)', which is one of the main causes of female infertility. If not treated, gonorrhea may also cause male sterility. Newborn babies may get the infection from infected mothers. The eyes of the newborn are affected and may result in blindness.

Signs / Symptoms Female

- Almost half of the infected women are asymptomatic
- Physical examination may be normal.
- Discharge: profuse yellow and pus-like discharge from the cervix.
- Friable cervix (easy bleeding on gentle touch or swabbing).
- Sometimes accompanied with dysuria and dyspareunia
- May be associated with spotting after intercourse or inter-menstrual bleeding.

Male

- Purulent discharge from the urethra.
- It is frequently accompanied by dysuria and sometimes by urethral itching
- Few patients are asymptomatic.

Newborn

- OphthalmiaNeonatorum

CHLAMYDIA

Chlamydia is a sexually transmitted disease and is caused by a microorganism called Chlamydia Trachomatis. It is often associated with other STIs, especially Gonorrhea (15-25% in men and 30-40% in women). Newborn babies may get this infection from their infected mothers during delivery.

Signs / Symptoms Female

- Many patients are asymptomatic

- Physical examination may be normal
- Discharge: abundant mucopurulent from the cervix
- Friable cervix
- May be associated with spotting after intercourse or inter menstrual bleeding
- Sometimes accompanied with Dysuria and frequent micturation.

Male

- Dysuria
- Mild or moderate clear urethral discharge
- Over 30% of the patients may be asymptomatic

Newborn

- OphthalmiaNeonatorum
- Infant Pneumonitis

PELVIC INFLAMMATORY DISEASE (PID)

PID is usually complication / consequence of untreated Gonorrhea or Chlamydia. This disease may also result from unsafe abortion, delivery, postpartum care and pelvic examination or IUD insertion without aseptic measures. In such cases symptoms usually appear within one month of the procedure. Millions of women are suffering from this disease and different parts of the reproductive tract may get infected as a result of this disease. PID is one of the main causes of infertility in women.

Sign / Symptoms

- Lower abdominal pain
- Fever more than 38°C
- Dysuria
- Dyspareunia
- Purulent discharge from cervix or vagina
- Adnexal or cervical motion tenderness
- Muscle guard or rebound tenderness
- Pelvic mass
- May be associated with bleeding from the vagina.

GENITAL ULCERS HERPES GENITALIA

Herpes is caused by a virus called Herpes simplex causes genital herpes.

Signs / Symptoms

Both for male and female

- Multiple, small, painful vesicles or superficial erythematous erosions
- Itching
- Dysuria
- Painful intercourse
- In women watery discharge from vagina may occur.

SYPHILIS

Syphilis is caused by a microbe called ‘Treponema Pallidum”. Incubation period of primary syphilis is about 3 weeks (range 10-90 days). Syphilis may be congenital or acquired. Clinical manifestations of syphilis have been divided into primary, secondary and tertiary stages.

In the primary and most infectious stage of syphilis one or more painless ulcer may appear which resolve spontaneously (without treatment). In female patients this stage usually passes unnoticed. If not treated, the disease may reach the secondary stage, which frequently begins as a systemic illness with fever, myalgia, headache and fatigue. Then it passes a long latent period and reaches the tertiary stage.

In pregnant woman primary syphilis may impair the development of the fetus and may result in premature delivery or death of the fetus. The baby may be at risk of acquiring congenital syphilis.

Primary Syphilis Signs / Symptoms

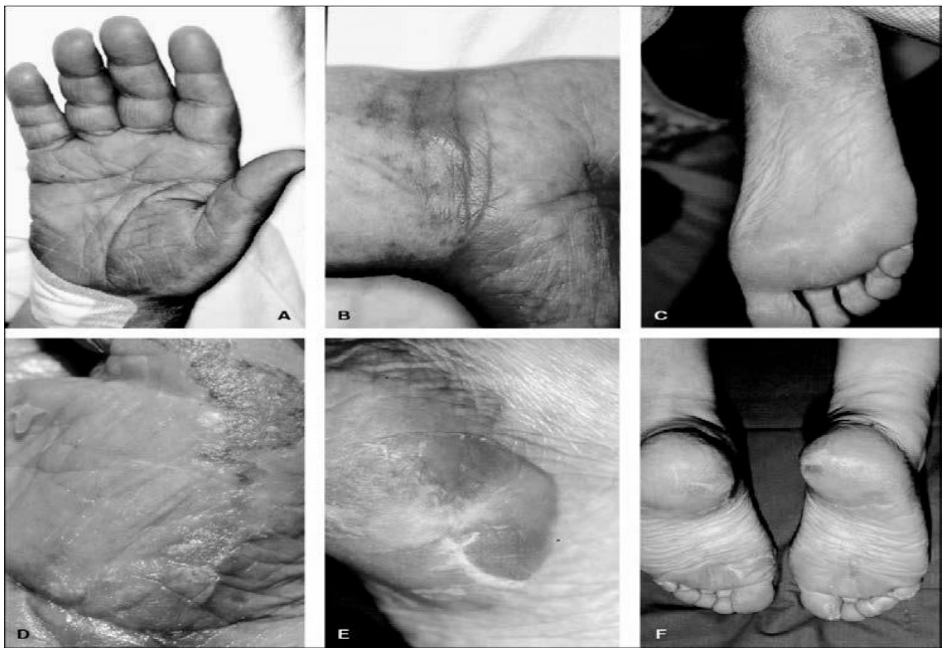
Both for male and female

- Single, firm, indurate and painless ulcer on the external genitalia.
- The ulcer is well demarcated with regular, rolled borders. The base looks clean, red, smooth and non-purulent.
- Bilateral painless firm enlarged lymph glands.

Secondary Syphilis Signs / Symptoms

Both for male and female

- Usually, non-itchy skin rash (maculopapular) in the trunk, flexor surfaces of upper limbs, palm and sole and may even spread throughout the entire body.
- Mucous patches in the mouth, generalized lymphadenopathy
- Condylomata, wart like lesions arising from the papules in the warm moist areas of the body such as the vulva, anus, scrotum, axillae and beneath the breasts.
- May pass asymptomatic.



Tertiary Syphilis

If not treated in the secondary stage, the extent of the disease widens further and within 2 to 15 years may affect the nervous system and the heart, causing neurosyphilis and cardio syphilis respectively.

CHANCROID

Heamophilus Ducreyi causes chancroid. The incubation period is 3-10 days. The prevalence of Chancroid is low as compared to other STI.

Signs / Symptoms of Chancroid

Both for male and female

- Single or multiple deep, painful, dirty looking (yellow/gray purulent necrotic material) ulcers in the genitalia.
- Irregular or ragged edged ulcer which bleeds easily on scraping
- Not associated with any discharge or itching
- Associated with enlarged unilateral, tender, fluctuant lymph nodes in the groin (Bubo).

LYMPHOGRANULOMA VENEREUM (LGV)

Bacteria called Chlamydia Trachomatis causes Lymphogranuloma Venereum. The incubation period is 3-12 days. The first stage of LGV consists of a genital ulcer, which is inconspicuous and short-lived and usually goes undiscovered. Most often the patient seeks care in the second stage of the disease when tender inguinal lymphadenopathy (Bubo) has developed. The secondary stage may develop in 10 days to 6 months. At this stage there is no evidence of an ulcer.

Signs / Symptoms

Both for male and female

- Small genital ulcer in the very initial stage (primary lesion rarely noticed, inconspicuous, painless ulcer and heals rapidly without leaving a scar)
- During secondary stage associated with unilateral swelling of lymph gland in the groin
- (Bubo), which is tender, fluctuant, and may rupture and forms a fistula.
- The characteristic ‘groove sign’ (cleavage of swollen inguinal and femoral lymph nodes by inguinal ligament) is rare for Chancroid but pathognomonic for LGV.

Differential Characteristics of Inguinal Lymph nodes associated with Genital Ulcers:

- LGV: unilateral, tender, fluctuant, can rupture
- Chancroid: unilateral, tender, fluctuant, can rupture
- Syphilis: bilateral, non-tender, firm
- Genital Herpes: bilateral, tender, firm (first episode)

GRANULOMA INGUINALE

(Donovanosis)

Granuloma Inguinale is caused by Calymmato bacterium Granulomatosis. The incubation period is 1-4 weeks, up to 6 months.

Signs / Symptoms

Both for male and female

- Single or multiple granulomatous ulcer which is painless (unless secondarily infected)
- Sharply demarcated raised borders
- Elevated base with red granulation tissue.
- Friable, bleeds readily on contact
- Associated with inguinal pseudo—adenopathy (granulomatous nodules)

CONDYLOMA ACCUMINATA (Anal and Genital Warts)

- Almost always transmitted by sexual contact.
- Caused by the human papilloma virus (HPV)
- Have an incubation period of 1-6 months
- Are soft fleshy growths with cauliflower appearance (can become quite large)
- Removal of warts is curative but recurrences are common
- Women with genital warts should have an annual pap smear because certain variants

are highly associated with cervical cancer

- May be confused with Condylomata, granulating lesions or carcinoma.

Some facts

- Are becoming an increasing common STI
- Can be confused with the Condylomata of secondary syphilis and some of the granulomatous lesions of Granuloma Inguinale.

Treatment of Condyloma Accuminata

- Cryo surgery with liquid Nitrogen
- Podophyllin resin (10% in Tincture of Benzene)
- Apply once or twice weekly until resolved.
- Should be washed off 2 hours after the first application
- Contraindicated in pregnancy

MOLLUSCUM CONTAGIOSUM

Consist of pearly white umbilicated papules that appear in the genital area. When transmission is nonsexual, they can be found on any part of the body.

Treatment of Molluscum Contagiosum

- Unroof lesions with a needle and express the central materials.
- Electrocautery
- Cryo surgery with liquid Nitrogen

SCABIES

The mite Sarcoptes scabiei causes infestation. The clinical features are caused by the female mite burrowing into the upper most layer of the skin and laying eggs and defecating. Infestation usually occurs as a result of close physical, but not necessarily sexual contact.

The patient usually complains of itching, which is often unbearable; arise at night when the body is warm. Lesions may often be found in the cleft of the fingers and on the wrists and elbows as well as on genitals.

Treatment of Scabies

- Permethrin (5%): to be applied all over the body thoroughly and washed off after 24 hours.
- May be repeated after 7 days.
- Crotamiton (10%) (Eurax): Apply at nightly from neck down for 2 nights. Patient should have a bath 24 hours after the 2nd application.
- Scabion cream

- Scabies soap

Advice

- Change and wash clothes and bed linen thoroughly.

PEDICULOSIS PUBIS

Infection is caused by the pubic louse, Phthirus pubis. The adult adheres not only to the pubic hair but also to other hairy areas of the body. It is a bloodsucker. The female lays eggs (nits) at the base of the hair and these usually hatch within 7 days. The adult louse is transferred from person to person through close contact. The patient may complain of irritation.

Treatment of Pediculosis Pubis

- Benzene hexachloride (1%): Apply to the whole body, and wash off after 24 hours not for pregnant or lactating women.

Advice

- Change and wash clothes and bed linens throughly.

11.4 HIV/AIDS

11.4 HIV/AIDS

More than 95% of all HIV infected people now live in developing world, which has likewise experienced 95% of all deaths to date from AIDS, largely among young adults who would normally be in their peak productive and reproductive years.

The human immunodeficiency virus (HIV) targets the immune system and weakens people's defense against many infections and some types of cancer. As the virus destroys and impairs the function of immune cells, infected individuals gradually become immunodeficient. Immune function is typically measured by CD4 cell count.

HIV is a sexually transmitted infection (STI). It can also be spread by contact with infected blood or from mother to child during pregnancy, childbirth or breast-feeding. Without medication, it may take years before HIV weakens your immune system to the point that you have AIDS.Immunodeficiency results in increased susceptibility to a wide range of infections, cancers and other diseases that people with healthy immune systems can fight off.The most advanced stage of HIV infection is acquired immunodeficiency syndrome (AIDS), which can take many years to develop if not treated, depending on the individual. AIDS is defined by the development of certain cancers, infections or other severe long term clinical manifestations. Acquired immunodeficiency syndrome (AIDS) is a chronic, potentially life-threatening condition caused by the human immunodeficiency virus (HIV). By damaging your immune system, HIV interferes with your body's ability to fight infection and disease. There's no cure for HIV/AIDS, but medications can dramatically slow the progression of the disease. These drugs have reduced AIDS deaths in many developed nations.

Stigma of HIV & AIDS: Shame, silence and denial

It is hard to measure stigma-people with HIV see it in a scornful look in the marketplace, in the refusal of family and friends to visit, care for or even touch them, in the maltreatment of their children or the loss of their job on a flimsy pretext. But stigma is a very real obstacle to both prevention and care. In many of the hardest hit countries, government officials and ordinary citizens including those most affected by the epidemic often continue to look the other way because of the rejection, discrimination and shame attached to AIDS.

Stigma and the fear it engender both fuel the spread of HIV, since those with risky behaviour in the past may be reluctant to change that behaviour in case the change is interpreted as an admission of infection. Fear of acknowledging HIV infection can stop a married man from raising the subject of condom use with his wife. Fear of advertising her HIV status may prevent an infected woman from giving her baby replacement feeding to avoid transmitting the virus through breast milk.

The stigma attached to HIV affects both sexes. However, the consequences may be more severe for women, who risk being beaten and even thrown out of the house by their husband if their status is revealed. This is true even when the husband was the source of the woman's infection. An HIV-infected woman may be blamed for the death of her children and deprived of care.

In places where shame and stigma are the rule, many people simply do not want to know if they are HIV-infected, even when counselling and testing are offered. And the small minority

of people who know their HIV status rarely share it with others, even in confidential support groups.

Silence can continue to reign even when people with HIV are ill and dying. Because AIDS is just the name for a cluster of diseases that immunodeficient people develop, patients and their careers can choose to view the illness as just tuberculosis, or diarrhea, or pneumonia.

STAGES OF HIV & AIDS INFECTION

- **Initial Stage:** In the initial stage of the disease most (60%) of the patients remain asymptomatic. But in few cases the patient may develop 'flu' like symptoms after 1-3 weeks. The fever in these cases may continue from 1 to 3 weeks.
- **Window Period:** The HIV virus takes about 3 to 6 months, for antibodies to become detectable in the blood, from the time of entering the body. This period is called the window period.
- **Asymptomatic HIV infection**: In some cases, the person may remain in the carrier stage for up to 15 years without developing any signs & symptoms. The person may transmit HIV to others during the asymptomatic stage.
- **Symptomatic Stage** - AIDS: About of 50% HIV carriers after 8 years and 60% after 15 years, develop AIDS.
- Once developed AIDS cannot be cured. Although there is no cure, treatment is available which can prolong the person's life and improve the quality of life.
- A person with AIDS may live up to 3 years in developed and up to 1 year in the developing countries.

WHO CLASSIFICATION:

The Revised WHO HIV/AIDS Clinical Staging System is intended for baseline assessment of patients and for use in provision of ongoing care. The revised system:

- Provides guidance including when to start, switch, or stop prophylactic medications, antiretrovirals, and other interventions.
- Assists clinicians in the assessment of a patient's current clinical status.
- Encourages clinical providers to offer diagnostic HIV testing to patients who exhibit clinical signs suggestive of HIV infection.
- Classifies disease in a progressive sequence from least to most severe.
- Is designed to be used with reference to current and previous clinical events, making it useful for surveillance purposes.

The Four Clinical Stages

The WHO system for adults sorts of patients into one of four hierarchical clinical stages ranging from stage 1 (asymptomatic) to stage 4 (AIDS). Patients are assigned to a particular stage when they demonstrate at least one clinical condition in that stage's criteria. Patients remain at a higher stage after they recover from the clinical condition which placed them in that stage

Stage 1.

Patients who are asymptomatic or have persistent generalized lymphadenopathy (lymphadenopathy of at least two sites [not including inguinal] for longer than 6 months) are categorized as being in stage 1, where they may remain for several years

Stage 2.

Even in early HIV infection, patients may demonstrate several clinical manifestations. Clinical findings included in stage 2 (mildly symptomatic stage) are unexplained weight loss of less than 10 percent of total body weight and recurrent respiratory infections (such as sinusitis, bronchitis, otitis media, and pharyngitis), as well as a range of dermatological conditions including herpes zoster flares, angular cheilitis, recurrent oral ulcerations, papular pruritic eruptions, seborrhoeic dermatitis, and fungal nail infections

Stage 3.

As disease progresses, additional clinical manifestations may appear. Those encompassed by the WHO clinical stage 3 (the moderately symptomatic stage) category are weight loss of greater than 10 percent of total body weight, prolonged (more than 1 month) unexplained diarrhoea, pulmonary tuberculosis, and severe systemic bacterial infections including pneumonia, pyelonephritis, empyema, pyomyositis, meningitis, bone and joint infections, and bacteremia. Mucocutaneous conditions, including recurrent oral candidiasis, oral hairy leukoplakia, and acute necrotizing ulcerative stomatitis, gingivitis, or periodontitis, may also occur at this stage

Stage 4.

The WHO clinical stage 4 (the severely symptomatic stage) designation includes all of the AIDS-defining illnesses. Clinical manifestations for stage 4 disease that allow presumptive diagnosis of AIDS to be made based on clinical findings alone are HIV wasting syndrome, *Pneumocystis carinii pneumonia* (PCP), recurrent severe or radiological bacterial pneumonia, extrapulmonary tuberculosis, HIV encephalopathy, CNS toxoplasmosis, chronic (more than 1 month) or orolabial herpes simplex infection, esophageal candidiasis, and Kaposi's sarcoma]. Other conditions that should arouse suspicion that a patient is in clinical stage include cytomegaloviral (CMV) infections (CMV retinitis or infection of organs other than the liver, spleen or lymph nodes), extrapulmonary cryptococcosis, disseminated endemic mycoses (e.g., coccidiomycosis, penicilliosis, histoplasmosis), cryptosporidiosis, isosporiasis, disseminated non-tuberculous mycobacteria infection, tracheal, bronchial or pulmonary candida infection, visceral herpes simplex infection, acquired HIV-associated rectal fistula, cerebral or B cell non-Hodgkin lymphoma, progressive multifocal leukoencephalopathy (PML), and HIV-associated cardiomyopathy or nephropathy

These categories apply to adults and adolescents 15 years-of-age and older. A modified version of the WHO Clinical Staging System is available for infants and children under 15

Signs and symptoms

The symptoms of HIV vary depending on the stage of infection. Though people living with HIV tend to be most infectious in the first few months after being infected, many are unaware of their status until the later stages. In the first few weeks after initial infection people may

experience no symptoms or an influenza-like illness including fever, headache, rash or sore throat.

As the infection progressively weakens the immune system, they can develop other signs and symptoms, such as swollen lymph nodes, weight loss, fever, diarrhoea and cough. Without treatment, they could also develop severe illnesses such as tuberculosis (TB), cryptococcal meningitis, severe bacterial infections, and cancers such as lymphomas and Kaposi's sarcoma.

SYMPTOMS

The symptoms of HIV and AIDS vary, depending on the phase of infection.

Primary infection (Acute HIV)

Some people infected by HIV develop a flu-like illness within two to four weeks after the virus enters the body. This illness, known as primary (acute) HIV infection, may last for a few weeks. Possible signs and symptoms include:

- Fever
- Headache
- Muscle aches and joint pain
- Rash
- Sore throat and painful mouth sores
- Swollen lymph glands, mainly on the neck
- Diarrhoea
- Weight loss
- Cough
- Night sweats

These symptoms can be so mild that the person might not even notice them. However, the amount of virus in the bloodstream (viral load) is quite high at this time. As a result, the infection spreads more easily during primary infection than during the next stage.

Clinical latent infection (Chronic HIV)

In this stage of infection, HIV is still present in the body and in white blood cells. However, many people may not have any symptoms or infections during this time. This stage can last for many years if the person does not have antiretroviral therapy (ART). Some people develop more severe disease much sooner.

Symptomatic HIV infection

As the virus continues to multiply and destroy your immune cells — the cells in the body that help fight off germs — a person may develop mild infections or chronic signs and symptoms such as:

- Fever
- Fatigue
- Swollen lymph nodes — often one of the first signs of HIV infection
- Diarrhoea
- Weight loss
- Oral yeast infection (thrush)
- Shingles (herpes zoster)
- Pneumonia

Progression to AIDS

When AIDS occurs, the immune system has been severely damaged. The person will be more likely to develop opportunistic infections or opportunistic cancers — diseases that wouldn't usually cause illness in a person with a healthy immune system.

The signs and symptoms of some of these infections may include:

- Sweats
- Chills
- Recurring fever
- Chronic diarrhoea
- Swollen lymph glands
- Persistent white spots or unusual lesions on your tongue or in your mouth
- Persistent, unexplained fatigue
- Weakness
- Weight loss
- Skin rashes or bumps

Causes

HIV is caused by a virus. It can spread through sexual contact or blood, or from mother to child during pregnancy, childbirth or breast-feeding.

How does HIV become AIDS?

HIV destroys CD4 T cells — white blood cells that play a large role in helping your body fight disease. The fewer CD4 T cells you have, the weaker the immune system becomes.

A person can have HIV infection, with few or no symptoms, for years before it turns into AIDS. AIDS is diagnosed when the CD4 T cell count falls below 200 or you have an AIDS-defining complication, such as a serious infection or cancer

Transmission

HIV can be transmitted via the exchange of a variety of body fluids from infected people, such as blood, breast milk, semen and vaginal secretions. HIV can also be transmitted from a mother to her child during pregnancy and delivery. Individuals cannot become infected through ordinary day-to-day contact such as kissing, hugging, shaking hands, or sharing personal objects, food or water.

It is important to note that people with HIV who are taking ART and are virally suppressed do not transmit HIV to their sexual partners. Early access to ART and support to remain on treatment is therefore critical not only to improve the health of people with HIV but also to prevent HIV transmission.

How HIV spreads

To become infected with HIV, infected blood, semen or vaginal secretions must enter your body. This can happen in several ways:

Sexual intercourse: the virus can pass from men to women or vice versa in heterosexuals, and from men to men in homosexuals or through any other form of sex where there occurs a breach of the mucous membrane or the skin. An infected partner, whether symptomatic or asymptomatic, is the cause of more than 90% HIV& AIDS.

Infection rates are very high among prostitutes and homosexuals; therefore, they represent the most dangerous source of transmission.

Anal Sex: Can increase risk of infection due to tears and rough sex act

Vaginal Sex: Presence of open Sores, Ulcers, Herpes or Syphilis increases the risk of HIV &AIDS.

Oral Sex: Presence of abrasions, ulcers of lips or mouth where infection can pass through blood and not saliva.

Contaminated Needles, syringes and skin piercing: instruments can pass the virus in 5-10 out of 1000 cases. Sharing contaminated IV drug paraphernalia (needles and syringes) puts you at high risk of HIV and other infectious diseases, such as hepatitis.

Drug addicts who often share syringes and needles for intravenous injections are particularly at risk of infection. The use of inadequately sterilized instruments also poses a risk.

Contaminated Blood and Blood products: transfusion of infected blood or blood products can transmit the virus in 90% of cases. In some cases, the virus may be transmitted through blood transfusions. In Pakistan, hospitals and blood banks now screen the blood supply for HIV antibodies, so this risk is very small.

During pregnancy or delivery or through breast-feeding.

Infected Mother to Child: This route is more correctly called Parent To Child Transmission (PTCT) Perinatal / Vertical Transmission from an infected mother to her baby can occur

during pregnancy, labour, delivery or even shortly after birth while nursing. Infected mothers can pass the virus on to their babies. Mothers who are HIV-positive and get treatment for the infection during pregnancy can significantly lower the risk to their babies. Not every baby born to an HIV positive mother will have HIV. Almost 10% of the HIV & AIDS affected cases in the whole world are children, mainly acquiring the infection from their infected mothers.

Breast-feeding by Infected Mother: Transmission is high in cases recently infected with HIV. The quantity of virus is high and they have not yet developed antibodies against the virus. Although HIV virus can be transmitted through breast milk, WHO still encourages breastfeeding in the developing world as chances of death of the baby as a result of malnutrition outweigh those by HIV infection.

How HIV doesn't spread

You can't become infected with HIV through ordinary contact. That means you can't catch HIV or AIDS by :

- Talking, sneezing, coughing or through air
- Insect bite
- Shaking hands with or embracing an infected person
- Kissing
- Sharing toilet or swimming pool with an infected person
- Playing or eating together.
- Using towels or clothes
- Living together with or taking care of a person with HIV & AIDS going to the same school as that of an infected person
- masturbation
- Having sex with a mutually faithful person who does not have AIDS
- Correct and consistent use of condom.
- HIV isn't spread through the air, water or insect bites.

Risk factors

Anyone of any age, race, sex or sexual orientation can be infected with HIV/AIDS. However, you're at greatest risk of HIV/AIDS if you:

1) having unprotected anal or vaginal sex; Use a new latex or polyurethane condom every time you have sex. Anal sex is riskier than is vaginal sex. Your risk of HIV increases if you have multiple sexual partners.
2) having another sexually transmitted infection (STI) such as syphilis, herpes, chlamydia, gonorrhoea and bacterial vaginosis; Many STIs produce open sores on your genitals. These sores act as doorways for HIV to enter your body.
3) sharing contaminated needles, syringes and other injecting equipment and drug

solutions when injecting drugs; People who use IV drugs often share needles and syringes. This exposes them to droplets of other people's blood.

4) receiving unsafe injections, blood transfusions and tissue transplantation, and medical procedures that involve unsterile cutting or piercing; and experiencing accidental needle stick injuries, including among health workers

5) Risk factors

   - Have an STI.
   - Use IV drugs.

COMPLICATIONS

HIV infection weakens the immune system, making the patient much more likely to develop many infections and certain types of cancers.

Infections common to HIV/AIDS

Pneumocystis pneumonia (PCP). This fungal infection can cause severe illness. Although it's declined significantly with current treatments for HIV/AIDS, in the U.S. PCP is still the most common cause of pneumonia in people infected with HIV.

Candidiasis (thrush). Candidiasis is a common HIV-related infection. It causes inflammation and a thick, white coating on your mouth, tongue, esophagus or vagina.

Tuberculosis (TB). In resource-limited nations, TB is the most common opportunistic infection associated with HIV. It's a leading cause of death among people with AIDS.

Cytomegalovirus. This common herpes virus is transmitted in body fluids such as saliva, blood, urine, semen and breast milk. A healthy immune system inactivates the virus, and it remains dormant in your body. If your immune system weakens, the virus resurfaces — causing damage to your eyes, digestive tract, lungs or other organs.

Cryptococcal meningitis. Meningitis is an inflammation of the membranes and fluid surrounding your brain and spinal cord (meninges). Cryptococcal meningitis is a common central nervous system infection associated with HIV, caused by a fungus found in soil.

Toxoplasmosis. This potentially deadly infection is caused by Toxoplasma gondii, a parasite spread primarily by cats. Infected cats pass the parasites in their stools, which may then spread to other animals and humans. Toxoplasmosis can cause heart disease, and seizures occur when it spreads to the brain.

Cancers common to HIV/AIDS

Lymphoma.

This cancer starts in the white blood cells. The most common early sign is painless swelling of the lymph nodes in your neck, armpit or groin.

Kaposi's sarcoma.

A tumor of the blood vessel walls, Kaposi's sarcoma usually appears as pink, red or purple lesions on the skin and mouth. In people with darker skin, the lesions may look dark brown or black. Kaposi's sarcoma can also affect the internal organs, including the digestive tract and lungs.

Other complications

Wasting syndrome. Untreated HIV/AIDS can cause significant weight loss, often accompanied by diarrhoea, chronic weakness and fever.

Neurological complications. HIV can cause neurological symptoms such as confusion, forgetfulness, depression, anxiety and difficulty in walking. HIV-associated neurocognitive disorders (HAND) can range from mild symptoms of behavioral changes and reduced mental functioning to severe dementia causing weakness and inability to function.

Kidney disease. HIV-associated nephropathy (HIVAN) is an inflammation of the tiny filters in your kidneys that remove excess fluid and wastes from your blood and pass them to your urine. It most often affects black or Hispanic people.

Liver disease. Liver disease is also a major complication, especially in people who also have hepatitis B or hepatitis C.

COUNSELIING AND EARLY DIAGNOSIS;

Counselling for HIV infection are recommended for the following persons:

- Persons who consider themselves at risk.
- Women of childbearing age who are at risk.
- Persons attending sexually transmitted disease clinics and drug abuse clinics.
- The spouses and sex or needle sharing partners of injecting drug users.
- Patients who received transfusions of unscreened blood or blood components.

Counselling points for HIV:

Once the confidentiality is in place:

1) Ensure the client that all information regarding HIV and this counselling session will remain confidential.
2) Assure the client that most people lead healthy and productive lives after HIV infection. In fact, most people are not aware they are infected because they feel fine.
3) Assess the client’s knowledge of harm / risk reduction, filling gaps, and correcting misinformation. Provide a demonstration with condoms ensuring that client understand their correct use. Discuss how to disinfect drug “works”, paraphernalia or where they might be able to obtain new injecting equipment for free or for purchase.
4) Discuss and role play on how client will introduce safer sex into new or preexisting

relationships; including how to eroticize safer sex (such as having the partner place the condom on the erect penis as part of foreplay). Try to create a safe atmosphere where the client would be comfortable to discuss possible domestic violence or the practice of sex for money or drugs.

5) There are not distinct categories of “innocents” and “deserving” in HIV. While it is true that some people may choose to take drugs or to practice risky sex, rarely do people want to become HIV -infected. HIV infection needs to be treated and discussed, without imposing value judgments.

If an HIV test is to be offered, assess the client’s overall mental state. Depending upon their mental state ask:

1) What the client has done in the past when confronting a life crisis. - If the client has ever considered committing suicide.
2) What the client would do if her / his HIV test came back positive. A client who says life would not be worth living or that she / he would kill her / himself should not be offered the test at that time.
3) The test should be only offered if the client has someone to bring with her / him to learn the results, or with whom she / he could share the results and get support.

Assess:

1) If the client is cognitively impaired and therefore unable to give informed consent to the test.
2) If the client is sober. Clients who are inebriated should be told to return for the test when they are sober.
3) If the client was coerced by someone else to take the test, but really does not want to be tested.

Diagnosis

HIV can be diagnosed through rapid diagnostic tests that provide same-day results. This greatly facilitates early diagnosis and linkage with treatment and care. People can also use HIV self-tests to test themselves. However, no single test can provide a full HIV diagnosis; confirmatory testing is required, conducted by a qualified and trained health or community worker at a community centre or clinic. HIV infection can be detected with great accuracy using WHO prequalified tests within a nationally approved testing strategy.

Most widely used HIV diagnostic tests detect antibodies produced by the person as part of their immune response to fight HIV. In most cases, people develop antibodies to HIV within 28 days of infection. During this time, people experience the so-called “window” period – when HIV antibodies haven’t been produced in high enough levels to be detected by standard tests and when they may have had no signs of HIV infection, but also when they may transmit HIV to others. After infection, an individual may transmit HIV to a sexual or drug-sharing partner or for pregnant women to their infant during pregnancy or the breastfeeding period.Following a positive diagnosis, people should be retested before they are enrolled in treatment and care to rule out any potential testing or reporting error.

HIV testing services

HIV testing should be voluntary and the right to decline testing should be recognized. Mandatory or coerced testing by a health care provider or authority, or by a partner or family member is not acceptable as it undermines good public health practice and infringes on human rights.

The sexual partners and drug-injecting partners of people diagnosed with HIV infection have an increased probability of also being HIV-positive. WHO recommends voluntary assisted HIV partner notification services as a simple and effective way to reach these partners – many of whom are undiagnosed and unaware of their HIV exposure and may welcome support and an opportunity to test for HIV..

All HIV testing services must follow the WHO-recommended principles known as the "5 Cs":

- informed Consent
- Confidentiality
- Counselling
- Correct test results
- Connection (linkage to care, treatment and other services).

For Clients deciding to take an HIV test:

Pre-test counselling session

- Have the client sign a written consent form. It is critical that client's written consent be maintained at the testing site or health care facility.
- It is the client's right to decline learning of an HIV test result. Some clients change their mind about testing after having their blood drawn and sent to the lab. If a client declines to return for test results, or returns to the site, but declines the results, that is her/ his right.
- Inform the client when they can expect their result and that result will be given only in person, i.e., not by mail or phone.
- Never setup post-test counselling sessions for Fridays / Saturday. It is bad practice to give bad test results before a weekend, when crisis intervention or other supportive services may not be available to help a client cope with bad news.

Negative Post-test session:

- Give test results immediately.
- Following the results, give clients time to absorb the news.
- Reaffirm the importance of practicing harm reduction

Positive Post-test Counselling:

- Give test results immediately.

- Following the results, give clients time to absorb the news whether good or bad. Obviously, HIV +VE test results will usually take longer to absorb and will often require lots of comforting from the counsellor. For positive test results it is important to remind clients that people can lead productive lives with HIV.
- Reaffirm the importance of practicing harm reduction to protect themselves and others.
- Discuss available options for partner notification, including role playing possible conversations.
- Make appropriate referrals and, if possible, schedule additional counselling sessions for the client. Many Diagnostic Centres of HIV & AIDS Exist In both Public and Private Sector All over the Pakistan

PREVENTION

There's no vaccine to prevent HIV infection and no cure for AIDS. But you can protect yourself and others from infection.

To help to prevent the spread of HIV:

- **Use treatment as prevention (TasP).** If you're living with HIV, taking HIV medication can keep your partner from becoming infected with the virus. If you make sure your viral load stays undetectable — a blood test doesn't show any virus — you won't transmit the virus to anyone else. Using TasP means taking your medication exactly as prescribed and getting regular checkups.
- **Use post-exposure prophylaxis (PEP**) if you've been exposed to HIV. If you think you've been exposed through sex, needles or in the workplace, contact your doctor or go to the emergency department. Taking PEP as soon as possible within the first 72 hours can greatly reduce your risk of becoming infected with HIV. You will need to take medication for 28 days.
- **Use a new condom every time you have sex.** Use a new condom every time you have anal or vaginal sex. Women can use a female condom. If using a lubricant, make sure it's water based. Oil-based lubricants can weaken condoms and cause them to break. During oral sex use a nonlubricated, cut-open condom or a dental dam — a piece of medical-grade latex.
- **Consider preexposure prophylaxis (PrEP).** The combination drugs emtricitabine plus tenofovir (Truvada) and emtricitabine plus tenofovir alafenamide (Descovy) can reduce the risk of sexually transmitted HIV infection in people at very high risk. PrEP can reduce your risk of getting HIV from sex by more than 90% and from injection drug use by more than 70%, according to the Centers for Disease Control and Prevention. Descovy hasn't been studied in people who have receptive vaginal sex.

The doctor will prescribe these drugs for HIV prevention only if you don't already have HIV infection. You will need an HIV test before you start taking PrEP and then every three months as long as you're taking it. Your doctor will also test your kidney function before prescribing Truvada and continue to test it every six months.

You need to take the drugs every day. They don't prevent other STIs, so you'll still need to practice safe sex. If you have hepatitis B, you should be evaluated by an infectious disease or liver specialist before beginning therapy.

- **Tell your sexual partners if you have HIV.** It's important to tell all your current and past sexual partners that you're HIV-positive. They'll need to be tested.
- **Use a clean needle. If you use a needle to inject drugs,** make sure it's sterile and don't share it. Take advantage of needle-exchange programs in your community. Consider seeking help for your drug use.
- **If you're pregnant, get medical care right away.** If you're HIV-positive, you may pass the infection to your baby. But if you receive treatment during pregnancy, you can significantly cut your baby's risk.
- **Consider male circumcision.** There's evidence that male circumcision can help reduce the risk of getting HIV infection

Prevention

Individuals can reduce the risk of HIV infection by limiting exposure to risk factors. Key approaches for HIV prevention, which are often used in combination, are listed below.

Male and female condom use

Correct and consistent use of male and female condoms during vaginal or anal penetration can protect against the spread of STIs, including HIV. Evidence shows that male latex condoms when used consistently have an 85% or greater protective effect against HIV and other STIs.

Testing and counselling for HIV and STIs

Testing for HIV and other STIs is strongly advised for all people exposed to any of the risk factors. This enables people to learn of their own HIV status and access necessary prevention and treatment services without delay. WHO also recommends offering testing for partners or couples. Additionally, WHO recommends voluntary assisted partner notification approaches, in which people with HIV receive support to inform their partners either on their own, or with the help of health care providers. Programmes that offer support for testing people in social networks can also be an effective and acceptable approach for some populations.

Testing and counselling, linkages to tuberculosis (TB) care

TB is the most common illness among people living with HIV. Fatal if undetected or untreated, TB is the leading cause of death among people with HIV, responsible for nearly 1 in 3 HIV-associated deaths.

Early detection of TB and prompt linkage to TB treatment and ART can prevent these deaths. TB screening should be offered routinely at HIV care services, and routine HIV testing should be offered to all patients with presumptive and diagnosed TB. TB preventive therapy should be offered to all people living with HIV who do not have active TB. Individuals who are diagnosed with HIV and active TB should urgently start effective TB treatment (including for multidrug-resistant TB) and ART.

Use of ARVs for prevention

Secondary prevention benefits of ART

Several studies confirmed that if an HIV-positive person is taking ART and is virally suppressed they do not transmit HIV to their uninfected sexual partners WHO recommended that all people living with HIV should be offered ART with the main aim of saving lives and contributing to reducing HIV transmission.

Pre-exposure prophylaxis (PrEP) for HIV-negative partner

Oral PrEP of HIV is the daily use of ARVs by HIV-negative people to block the acquisition of HIV. More than 10 randomized controlled studies have demonstrated the effectiveness of PrEP in reducing HIV transmission among a range of populations, including serodiscordant heterosexual couples (where one partner is infected and the other is not), men who have sex with men, transgender women, high-risk heterosexual couples, and people who inject drugs.

WHO recommends PrEP as a prevention choice for people at substantial risk of HIV infection as part of a combination of prevention approaches.. WHO has also expanded these recommendations to HIV-negative women who are pregnant or breastfeeding.. For men who have sex with men “event driven’ PrEP is also an effective PrEP option. This is taking two pills between two and 24 hours before sex; then, a third pill 24 hours after the first two pills, and a fourth pill 48 hours after the first two pills. This is often known as the 2+1+1. Long-acting PrEP products including an injection and a vaginal ring show promise and WHO will continue to review the data on these for future guidance.

Post-exposure prophylaxis for HIV (PEP)

PEP is the use of ARVs within 72 hours of exposure to HIV to prevent infection. PEP includes counselling, first aid care, HIV testing, and administration of a 28-day course of ARV drugs with follow-up care. WHO recommends PEP use for both occupational and non-occupational exposures, and for adults and children.

Harm reduction for people who inject and use drugs

People who inject drugs can take precautions against becoming infected with HIV by using sterile injecting equipment (including needles and syringes) for each injection, and not sharing drug-using equipment and drug solutions. Treatment of drug dependence, in particular, opioid substitution therapy for people dependent on opioids, also helps to reduce the risk of HIV transmission and supports adherence to HIV treatment. A comprehensive package of HIV prevention and treatment interventions for people who inject drugs includes:

- needle and syringe programmes
- opioid substitution therapy for people dependent on opioids, and other evidence-based drug dependence treatment
- HIV testing and counselling
- HIV treatment and care
- risk-reduction information and education, and provision of naloxone to prevent opioid

overdose

- access to condoms; and
- management of STIs, TB and viral hepatitis.

Elimination of mother-to-child transmission of HIV

The transmission of HIV from an HIV-positive mother to her child during pregnancy, labour, delivery or breastfeeding is called vertical or mother-to-child transmission (MTCT). In the absence of any interventions during these stages, rates of HIV transmission from mother-to-child can be between 15% and 45%. The risk of MTCT can almost be eliminated if both the mother and her baby are provided with ARV drugs as early as possible in pregnancy and during the period of breastfeeding.

Treatment

HIV can be suppressed by treatment regimens composed by a combination of 3 or more ARV drugs. Current ART does not cure HIV infection but highly suppresses viral replication within a person's body and allows an individual's immune system recovery to strengthen and regain the capacity to fight off infections.

Since 2016, WHO recommended that all people living with HIV be provided with lifelong ART, including children, adolescents and adults, and pregnant and breastfeeding women, regardless of clinical status or CD4 cell count.

In addition, one third of people living with HIV present to care with advanced disease, usually with severe clinical symptoms, low CD4 cell counts, and at high risk of developing serious illness and death. To reduce this risk, WHO recommends that these individuals receive a “package of care” that includes screening tests and drug prophylaxis for the most common serious infections that can cause severe morbidity and death, such as TB and cryptococcal meningitis, in addition to rapid ART initiation.

Addressing structural barriers for key populations to improve access to testing and treatment:

A set of enabling interventions will help address structural barriers to services for key populations and others:

- Review and revision of laws, policies and practices including the decriminalization of behaviours such as sex work, drug use, sexual preference or gender identity
- Antidiscrimination and protective laws to address stigma and discrimination
- Available, accessible and acceptable health services for key populations
- Enhanced community empowerment
- Addressing violence against people from key populations

PREVENTION OF AIDS

Perinatal Prevention

Perinatal transmission of HIV, from mother to child, is often preventable, through avoidance of breastfeeding and invasive obstetrical procedures, and taking of antiviral medications in the pregnant woman and neonate. These prophylactic practices are not absolute, but do reduce the risk of transmission, mother to child, considerably. Many women cannot afford nor have access to a safe alternative to breastfeeding. Additionally, in some places, avoiding breastfeeding, when it is the norm, can stigmatize a woman as HIV positive.

Prevention of AIDS through Acronym AIDS:

A: Avoiding unprotected sex with more than one partner

I: Information or education

D: Drug abuse - avoid

S: Safe blood transfusion

Educating Clients regarding

- Safe sex and its practice
- Correct and consistent use of condom, especially if the patient or partner(s) is suspected of having STI
- Using a sterilized or new disposable syringe
- Using HIV & AIDS screened blood
- Informing pregnant infected mothers about the probable consequences of having a baby and help her take decision.

Promoting safe medical practices

- Processing (decontamination, cleaning and sterilization) of all needles, syringes and surgical instruments
- Strict application of infection prevention measures
- Destruction of all disposable supplies
- Administering blood transfusion only when necessary.

Protecting health staff

- Wearing gloves for all procedures requiring contact with blood or body fluids.
- Wearing gloves while processing surgical instruments using sterile instruments only
- Proper laundering of soiled linen.

World Health Organization. Interim WHO clinical staging of HIV/AIDS and HIV/AIDS case definitions for surveillance: African region. Switzerland: World Health Organization; 2005.

11.5 MANAGEMENT AND FOLLOW UP

11.5 SYNDROMIC MANAGEMENT AND FOLLOW UP

The Syndromic Management of RTI / STI Cases

Ideally diagnosis of a patient with STI is made by knowing exactly what organism present performing laboratory tests are. Unfortunately, current methods of STI diagnosis are often unreliable, expensive, and require sophisticated equipment and training in their use. In addition, certain tests require patients to return in one or two days; this is not feasible in many settings, where the patients must travel a long distance to receive health care. Even if they come back, the period of infectivity is prolonged by this delay in therapy.

A syndrome is a collection / set or a group of symptom s pertaining to different systems of the body that the patient complains of and the signs observed by the service provider while examining the patient.

Syndromic case management is based on identifying syndromes and providing treatment which will deal with majority of organisms responsible for producing each syndrome. The syndromic management endorsed by the WHO, is based on identifying the various syndromes and managing the patient by using the perspective flow chart or algorithm. It has been shown to be valid, feasible and cost effective in most settings and has been applied successfully in different countries throughout the world.

Approaches of RTI / STI Diagnosis

Various Approaches of RTI / STI Diagnosis are:

- Etiological approach
- Clinical approach
- Syndromic approach

Etiological Approach based on laboratory tests and findings:

In this approach the specific causative agents are identified for diagnosing RTI / STI. This approach is expensive and not easily accessible to all. Laboratory tests are essential for detecting RTIs/STIs in asymptomatic and high-risk women. Etiological approach requires skilled manpower and certain sophisticated tools. A large number of patients seek care for RTI/STI at the primary health care level, and at this level the required facilities and skill for etiological diagnosis are not available. Tests often require patient to return for the results. Furthermore, there can be false (-VE) or false (+VE) cases.

Clinical Approach based on signs and symptoms:

In this approach, clinical diagnosis of a typical and specific RTI / STI is done by examining a patient using clinical experience, to identify symptoms / signs. This requires specialization on the issue. Even the most experienced RTI / STI specialists find it difficult to diagnose cases with mixed or secondary infections or mal-treated cases with altered presenting symptoms.

Furthermore, HIV & AIDS infection can greatly modify the clinical picture of RTI / STI.

Syndromic Approach based on recognizing syndromes:

Syndromic Case Management gives the opportunity to treat the patient at the primary level, requires little skill and the provided treatment deals with majority of the organisms responsible for producing each syndrome. For example, in the syndromic approach, one would diagnose and treat urethral discharge (syndrome) as opposed to Gonorrhea and Chlamydia.

Advantages of the Syndromic Approach

- Reduces probability of incorrect clinical diagnosis by dealing with most likely causative agents.
- Provides diagnosis & treatment even when laboratory support / backup is not available.
- Allows patients to be treated effectively at their first visit. Uniformity in collecting data.
- Easy availability of drugs (stock).
- Can be used even at primary health care level.
- Reach more people i.e. can be implemented on a large scale
- Avoid stigmatization of people.
- Easy to train the health care providers and can be used by any health worker at any level of health facility.
- Simple and easy to follow. Simplifies drug selection and procurement and can help to control resistance.
- Easier monitoring & supervision.
- Most Cost-effective / inexpensive.
- Simplifies reporting, reduces workload and enhances quality reporting.

Disadvantages of the syndromic approach:

- Low sensitivity especially in women.
- Requires more drugs.
- Possibility of over treatment
- Undue exposure to potential side effects of drugs due to over treatment.
- Cannot be used for asymptomatic patient (except upon risk assessment for females).
- Health care provider feels uncomfortable not to be able to use his / her clinical experience.

STI syndromes and identifying the syndromes

Although RTIs / STIs are caused by many different organisms, these organisms give rise to only a limited number of syndromes. Following are the most common syndromes of RTIs / STIs

- Urethral discharge

- Vaginal discharge
- Genital ulcer
- Lower abdominal pain
- Scrotal swelling.
- Inguinal bubo
- Neonatal conjunctivitis

Following table explains the signs and symptoms for the main RTI / STI syndromes and their most common etiologies

Syndromes	Symptoms	Signs	Most common etiologies
Urethral discharge (UD)	Urethral discharge Dysuria Frequent micturition	Urethral discharge	Gonorrhea Chlamydia
Vaginal Discharge (VD)	Vaginal dis-charge Profuse foul-smelling discharge Vaginal itching Dysuria Painful inter-course	Vaginal discharge (nature of discharge per speculum examination is possible) Endocervical discharge Friability of cervix	Vaginitis Trichomoniasis Candidiasis Cervicitis Gonorrhea Chlamydia
Genital ulcer (GU)	Genital ulcer	Genital ulcer Enlarged inguinal lymph nodes	Syphilis Chancroid Genital Herpes
Lower abdominal pain (PID)	Lower abdominal pain Painful intercourse	Vaginal discharge Lower abdominal tenderness on palpation/cervical motion tenderness Temperature >38°C or 100.4F°	Gonorrhea Chlamydia Mixed anaerobes

Scrotal swelling (SS)	Scrotal pain and or swelling	Scrotal tenderness and swelling	Gonorrhea Chlamydia
Inguinal bubo (IB)	Painful enlarged inguinal lymph nodes	Swollen tender lymph nodes Fluctuation Abscesses or fistulae	LGV Chancroid
Neonatal Conjunctivitis (NC)	Swollen eye-lids Discharge from eyes Baby cannot open eyes.	Edema of the eyelids Purulent discharge	Gonorrhea Chlamydia

Flow charts for Syndromic Management of RTI / STI

World Health Organization/Global Prevention of AIDS (WHO/GPA) has developed a set of standard syndromic flow charts that take into account the most common etiologies for each syndrome.

Each flow chart is broadly made up of a series of three steps, these are

- The clinical problems (the patient's presenting symptoms
- The decision that needs to be taken
- The action that needs to be carried out.

The flow charts called "Algorithms" are in fact a decision and action tree. Each flowchart begins with a patient complaint and guides the user through a series of decisions and actions ending with an instruction on how to manage the patient (or, in a few cases, an instruction to refer the patient). Benefits of the flow charts are:

- **Promptness of treatment,** because RTI / STI services can be made available at any first-line health facility, patients are thus treated at their first visit and need not to be referred.
- **Wider access to treatment,** since treatment is available at most of the health centers, so a wider population can be covered.
- **Opportunities for introducing** preventive and primitive measures such as through education and condom distribution.

Referral of RTI / STI Cases: Syndromic approach to RTI/STI case management alone cannot take the responsibility of RTI / STI control of a country. Successful syndromic RTI / STI case management must always be very well supported by well-organized referral network (laboratory support and specialized service providers)

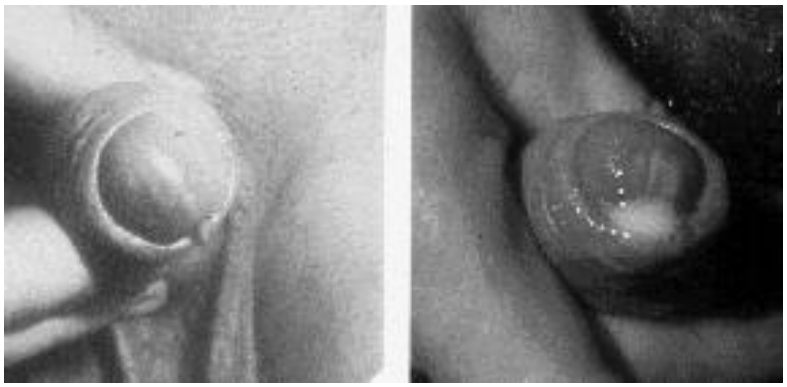
URETHRAL DISCHARGE

Urethral discharge is the most common sexually transmitted disease (RTI / STI) in men and is the characteristic manifestation of urethritis.

Causes of Urethral Discharge

Important causes of urethral discharge are infection of the urethra by:

- Neisseria Gonorrhea (Gonococcal Urethritis).
- Chlamydia Trachomatis.
- Trichomonas Vaginalis.



Signs and Symptoms of the Syndrome

- Urethral discharge (can be confirmed by milking of the urethra) frequently accompanied by pain or burning when passing urine (dysuria).
- Frequent micturition.
- Sometimes by urethral itching.
- Urethral discharge can be associated with scrotal pain and swelling (Epididymitis) which tends to be unilateral (use the Scrotal Swelling Flow chart)

Complications

- The most common complication in men is Epididymitis, which can lead to decreased fertility or sterility, if both testicles are affected.
- Other complications are urethral strictures and peri urethral abscess.
- The most serious complications of Gonococcal and Chlamydial infections if untreated, falls upon their female partners who are often unaware of their infection, develop cervical infection which leads to pelvic inflammatory disease, infertility or Ectopic pregnancy.
- Untreated urethritis in men (and the resulting cervicitis in women) facilitates the acquisition and transmission of HIV & AIDS infection.

Advice / Referral

Advise the woman to tell her husband (partner) to seek advice of a medical specialist

Management of Urethral Discharge Syndrome

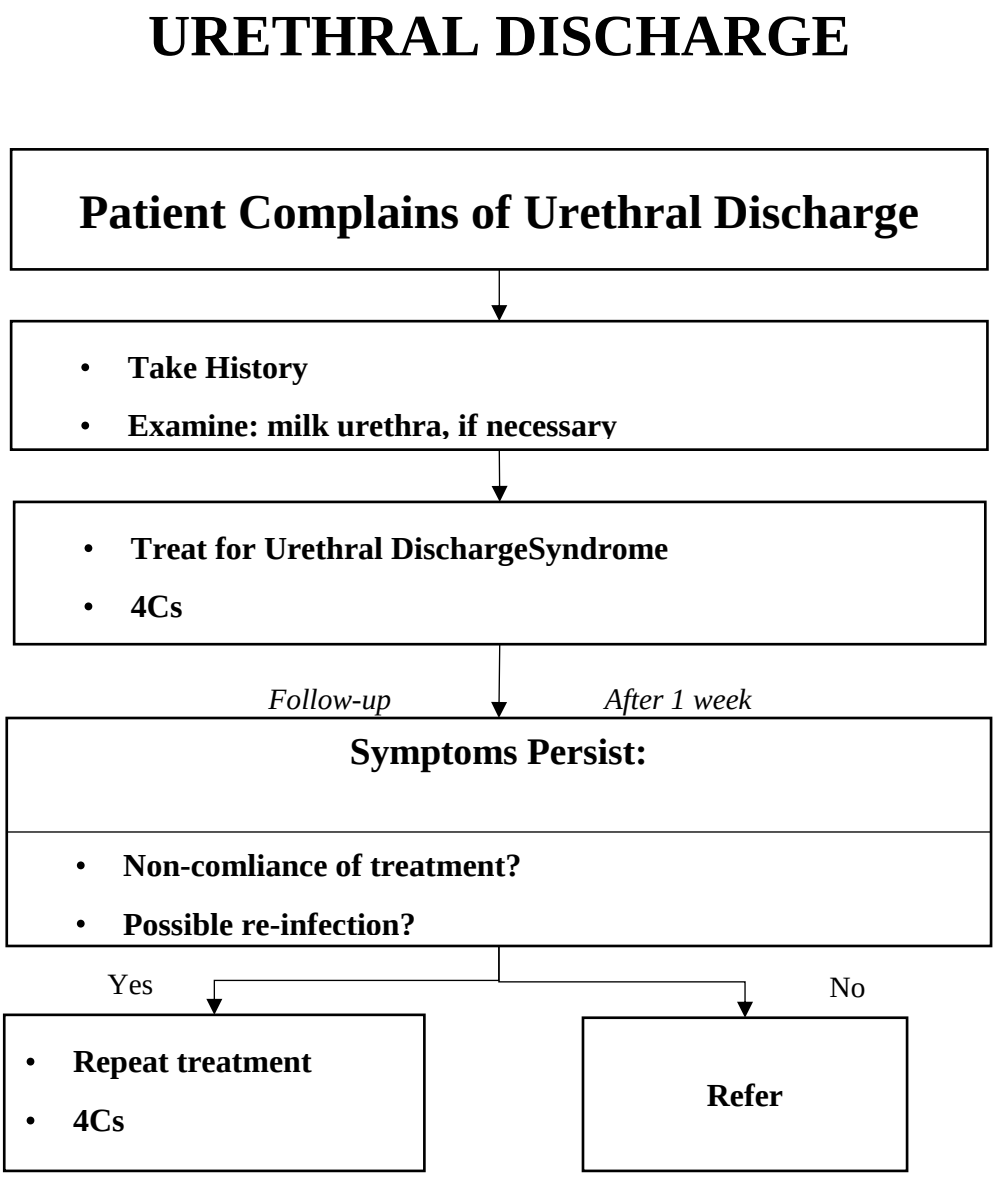
To confirm the Syndrome, do the following:

Take History

- History and nature of urethral discharge
- Burning sensation or pain during micturition

Physical Examination

- Inspect the genital organs including the interior part of the prepuce and the covered part of glans penis and look for:
- Urethral discharge (milk urethra, if necessary)
- Check for other RTI / STI



TREATMENT of Urethral Discharge Syndrome:

- Tab Ciprofloxacin 500 mg orally as a single dose* or Inj Ceftriaxone250 mg IM as a single dose
- Cap Doxycycline100 mg orally 12 hourly x 7 days* or Tab Erythromycin500 mg orally 6 hourly x 7 days.
- Should not be prescribed for partner if she is pregnant or lactating.
- If possible, single dose treatment should be taken / given at the clinic.
- Persistence of Urethral discharge may be due to resistance to antibiotics, possible re- infection, and non-compliance of treatment.
- Partner notification card: Give card for partner(s) management with diagnostic code 'UD' to be treated for Cervicitis

GENITAL ULCER

Causes of Genital Ulcer

Common Causes of Genital Ulcers are

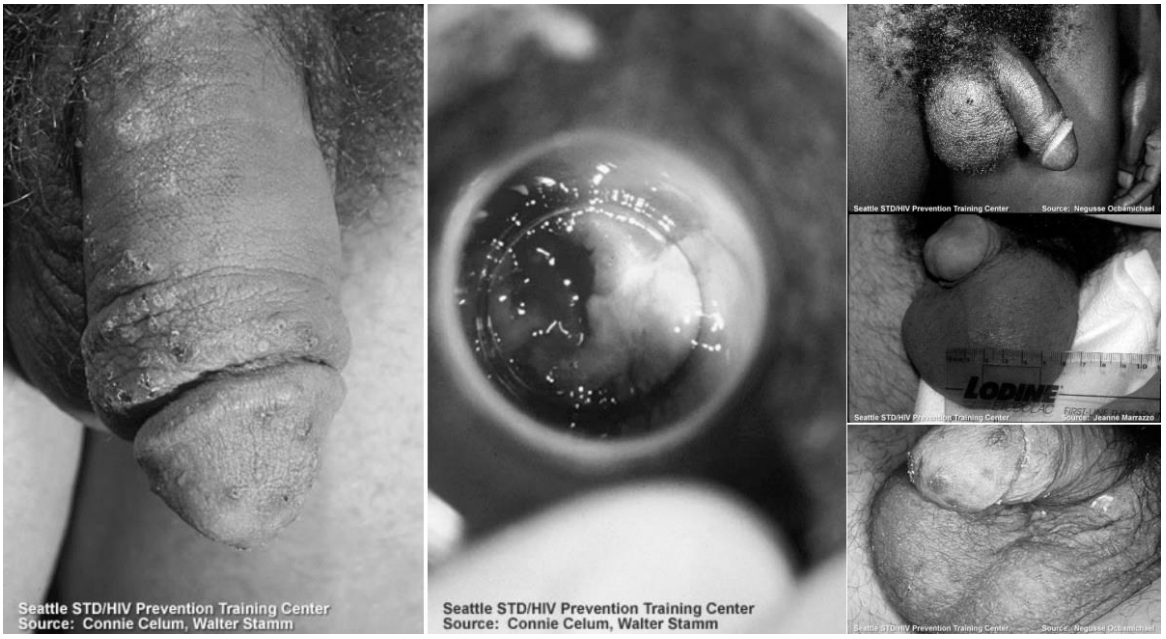
- Primary or recurrent genital herpes
- Chancroid
- Syphilis
- LymphogranulomaVenereum (LGV)

Signs and Symptoms of the Syndrome

- Ulcers, sores or vesicles in the genital area
- The ulcer could be painful or painless, single or multiple
- Frequently associated with unilateral or bilateral inguinal lymphadenopathy (also known as a bubo)
- Patients with inguinal swelling (bubo) in the absence of genital ulcer disease are ascribed to the inguinal swelling syndrome and are managed according to that flow chart.

It is not possible to make a conclusive distinction between the different etiologies of genital ulcers on clinical grounds, because:

- Mixed infections are common,
- The appearance of the lesions could be altered by associated HIV & AIDS infection, other secondary infections, use of systemic and topical antibiotics, corticosteroids and other local remedies (e.g., treatment of Chancroid may mask the course of incubating syphilis).
- Syphilis and Chancroid are the most common curable causes of genital ulcer disease.



Complications

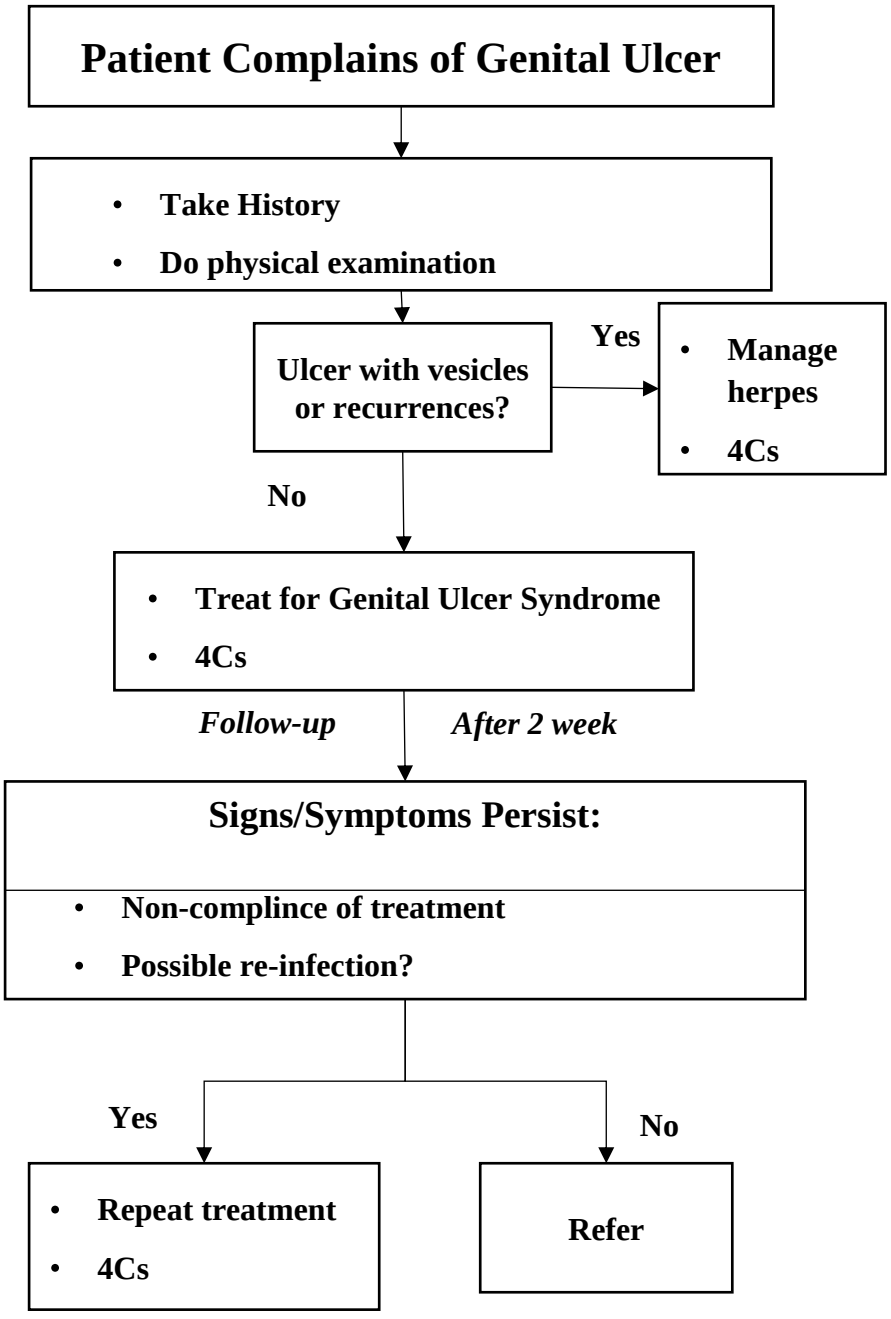
- All ulcers increase risk of acquiring and transmitting HIV & AIDS infection left untreated, Syphilis has serious consequences,
- Late / tertiary Syphilis: neurosyphilis and cardiovascular syphilis.
- Transmission to the fetus: stillbirth, premature delivery and congenital syphilis.

Counselling

Counsel on 4Cs Referral

If Genital Ulcer persists after treatment for 2 weeks using appropriate antibiotic and adherence to 4Cs, refer the patient to appropriate facility / individual / established next level referral center.

GENITAL ULCER



MANAGEMENT OF GENITAL ULCER SYNDROME

To confirm the Syndrome, do the following:

Take History

Physical Examination

- Inspect the genital organs and look for Ulcers

- Don’t forget to inspect the interior part of the prepuce and the covered part of the glans penis in men, and the skin of the external genitalia including the mucous surfaces of the labia and anus in women.
- Palpate inguinal lymph nodes for swelling.
- The patient with vesicular lesions but without ulcers needs management of Herpes.
- Check for other RTI / STI.

Treatment of Genital Ulcer Syndrome

- Inj Benzathine Penicillin G 24 lac Units (2.4 million Units) deep IM as a single dose (after skin test) or Cap Doxycycline 100 mg, orally 12 hourly x 14 days * or Tab Erythromycin500 mg, orally 6 hourly x 14 days ** and
- Tab Erythromycin500 mg orally 6 hourly x 10-14 days or Tab Ciprofloxacin500 mg orally as a single dose* or Inj Ceftriaxone250 mg, IM as a single dose
- Should not be prescribed to women if she is pregnant or lactating.

If Erythromycin is selected from 1st group there is no need to select any drug from the 2nd group, and should be given for 14 days.

- If possible, single dose treatment should be taken/given at the clinic.
- Persistence of Genital Ulcer may be due to resistance to antibiotics, possible re-infection or non-compliance of treatment.
- Partner notification card: Give card for partner(s) management with diagnostic code ‘GU’ to be treated for Genital ulcer.

Management of Associated Lymphadenopathy (bubo)

- If Bubo becomes fluctuant, it may burst and create more complications.
- A fluctuant bubo should always be managed by a trained practitioner; it should never be excised but drained using a large bore sterile needle.

Management of Genital Herpes

- Herpes cannot be cured.
- Patients should be reassured but warned that a recurrence of ulceration is possible.
- The patient should be informed to avoid unprotected sexual intercourse while lesions are present.
- Herpes infection can be passed whether ulceration is present or not.
- Treatment of herpes is palliative.
- Tell the patient to clean the lesions with soap and water and keep it dry.
- Acyclovir (Virux) may be used locally every 4 hours for 5-10 days.

SCROTAL SWELLING

Scrotal swelling is caused by epididymitis, trauma, tumor, and torsion of the testis.

Causes of Scrotal Swelling are

- Infections such as:
- Complication of Gonococcal urethritis and Chlamydial urethritis,
- Enteric bacteria, which cause urinary tract infections (more common in men over 35 years age).
- Chronic infections such as Tuberculosis, and Filariasis.
- Non-infectious causes like:
- Testicular torsion
- Trauma to Scrotum

Infection of the testis is a serious complication of Gonococcal and Chlamydial urethritis. If early and effective therapy is not given, the inflammatory process will resolve, and healing occurs with fibrous scarring and destruction of testicular tissue.

Signs and Symptoms of the Syndrome

- Swollen, hot and very painful testis in patient with testicular infection.
- Usually, unilateral
- May be associated or preceded by urethral discharge or, dysuria.
- High fever and hydrocele in patient with Filarial epididymitis (often bilateral involvement)
- May be associated with mild constitutional symptoms such as fever, mylagia and malaise.
- Complications

When not effectively treated, RTI / STI related epididymitis may lead to infertility.

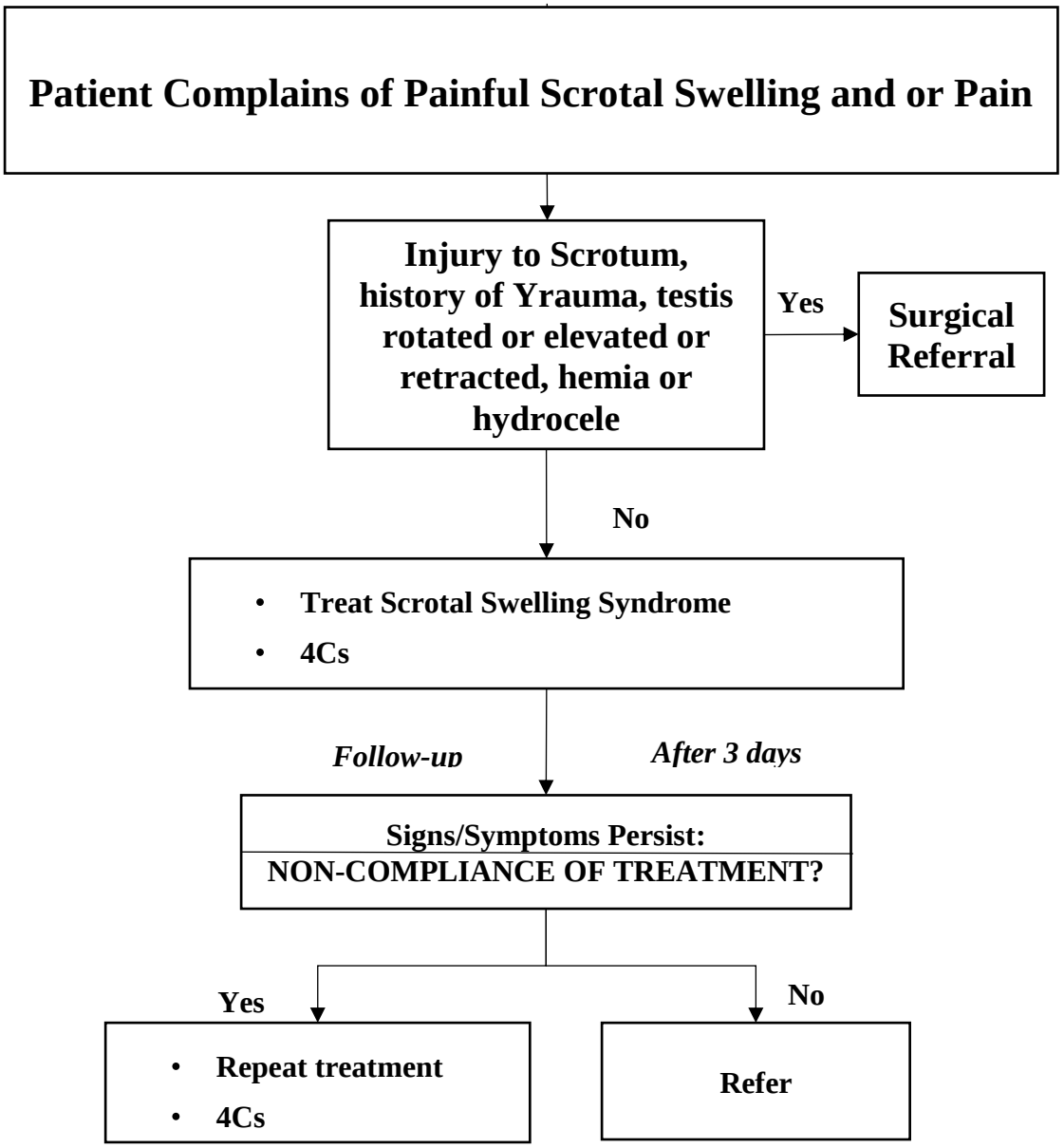
Recommendation

Scrotal Swelling should be treated for both Gonococcal and Chlamydia infections.

Referral

If Scrotal Swelling worsens or does not improve even after the treatment for1week using appropriate antibiotic and adherence to 4Cs, refer the patient to appropriate facility

SCROTAL SWELLING



MANAGEMENT OF SCROTAL SWELLING SYNDROME

To confirm the syndrome, do the following;

Take History

- History and nature of scrotal swelling
- History of injury
- History of RTI / STI in last 6 weeks
- Any urethral discharge

- Contraceptive surgery.
- History of RTI / STI

Physical Examination

- Inspect the scrotal skin for bruises.
- Compare two sides of the scrotum and scrotal sacs.
- Check for swelling and tenderness of testes.
- Check for position of testes in scrotum (elevation, rotation, torsion)
- Check for other RTI / STI.

Treatment of Lower Abdominal Pain Syndrome

- Tab Ciprofloxacin 500 mg, orally as a single dose* or Inj Ceftriaxone 250 mg, IM as a single dose
- Cap Doxycycline 100 mg orally 12 hourly x 10 days* or Tab Erythromycin 500 mg orally 6 hourly x 10-14 days

Should not be prescribed for partner if she is pregnant or lactating

Single dose treatment should be given / taken at the clinic.

- Persistence of scrotal swelling may be due to resistance to antibiotics, non-compliance of treatment.
- Partner notification card: Give card for partner(s) management with diagnostic code “SS” for partner to be treated for Cervicitis.

INGUINAL SWELLING (BUBO)

Inguinal bubo is an abscess of an inguinal lymph node. Acute infections of either the lower limb or the genital region may cause inguinal lymph adenopathy.

Causes of Inguinal Bubo

Buboes are usually caused by

- Chancroid when bubo and ulcer co-exist,
- LymphogranulomaVenereum (LGV), there is usually no ulcer present.
- Syphilis, genital herpes and tuberculosis: cause non-tender, non-fluctuant and firm bubo.

Signs and Symptoms

- Unilateral or bilateral enlargement of inguinal lymph nodes.
- May be associated with genital ulcer disease.
- The swollen lymph nodes are tender, fluctuant and may rupture.

Difference between the Bubo of Chancroid and LGV

- The primary genital lesion (ulcer) is usually absent or inconspicuous in LGV.
- The characteristic groove sign (cleavage of swollen inguinal and femoral lymph nodes by inguinal ligament) is rare for Chancroid but pathognomonic for LGV.
- The first stage of LGV consists of a genital ulcer. But the ulcer produced by LGV is so inconspicuous and short-lived that it usually goes undiscovered. Most often, the patient seeks care in the second stage of the disease when tender inguinal lymphadenopathy (bubo) has developed. At that stage, there is no longer evidence of an ulcer.

Complications

- Genital Elephantiasis
- Fistula

Recommendation

Inguinal bubo without Genital Ulcer should be treated for LGV infection.

Referral

If Inguinal Bubo worsen or do not improve even after the treatment for 1 week using appropriate antibiotic and adherence to 4Cs, refer the patient to appropriate facility / individual / established next level referral center.

MANAGEMENT OF INGUINAL BUBO SYNDROME

Medical Strategies to Confirm the Syndrome:

Take History

- History of groin pain
- Recent or past genital ulcer
- Recent or past swelling anywhere in the body.

Do Physical Examination

- Inspect and palpate the lymph nodes for:
- Tenderness, warmth, fluctuation,
- Draining area.
- Inspect genital organs for ulcers
- Look for skin rashes or sore.
- If a bubo is present don’t forget to inspect the interior part of the prepuce and covered part of the glans penis in men, and external genitalia and mucous surface of the labia in women to exclude the presence of genital ulcers.

- Check for other RTI / STI.

Treatment of Inguinal Bubo Syndrome

- Cap Doxycycline100 mg, orally 12 hourly x 14 days *
- Tab Erythromycin500 mg orally 6 hourly x 14 days

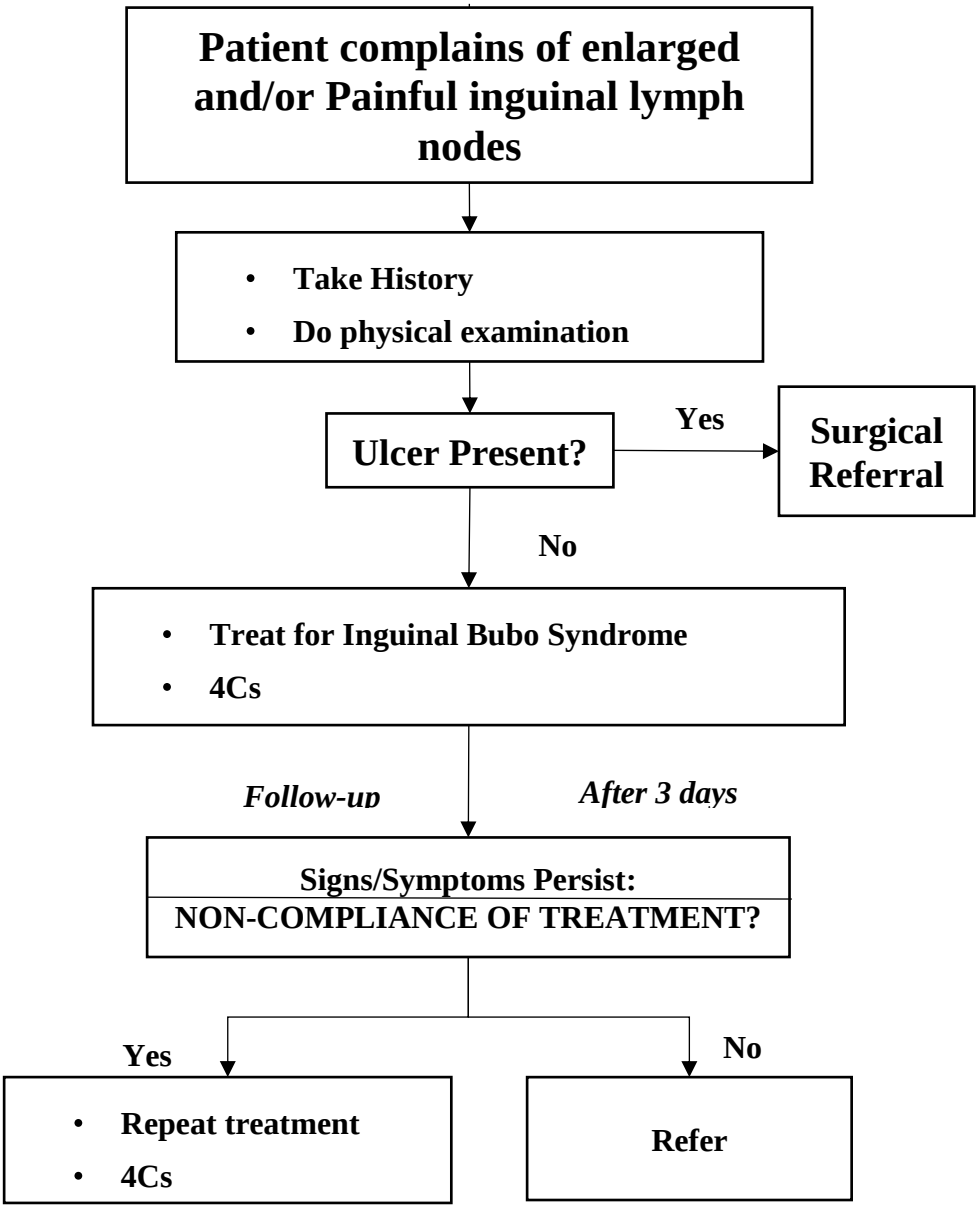
Should not be prescribed during pregnancy or lactation.

- Single dose treatment should be given/taken at the clinic.
- Persistence of Inguinal Bubo may be due to non-compliance of treatment
- Partner notification card: Give card for partner(s) management with diagnostic code “IB”.
- Partner to be treated for LGV.

Management of Fluctuant Bubo (es)

- If a bubo becomes fluctuant, it may burst and create more complications.
- Management of a Fluctuant Bubo should include.
- Hot Fomentation
- Buboes should not be incised but aspirated with wide bore needle.
- Surgical aspiration of fluctuant bubo should be done through the adjacent healthy skin.
- If necessary, aspiration could be repeated after 2-3 days,
- Refer, if necessary

INGUINAL BUBO



NEONATAL CONJUNCTIVITIS

Neonatal Conjunctivitis or Ophthalmia Neonatorum is defined as any conjunctivitis with discharge occurring in infants during the first 28 days of life. The infection is usually acquired during pregnancy or at birth, through an infected birth canal.

Causes of Neonatal Conjunctivitis

The most serious causes of Neonatal Conjunctivitis are

- RTI / STI causing organisms like Neisseria Gonorrhea, Chlamydia Trachomatis.
- Pyogenic bacteria: Staphylococcus aureus, Streptococcus pneumonia,

- Occasionally other Gram-negative bacteria (often acquired in hospital)

Signs and Symptoms

The signs and symptoms depend on whether it is caused by Neisseria Gonorrhea, Chlamydia Trachomatis or other bacterial infections acquired at, or after birth.

Although each etiological agent produces a slightly different pattern of disease, the sign / symptoms considerably overlap.

- Purulent conjunctival discharge
- Swollen eyelids.
- Unilateral or bilateral

Complications

- Ulceration of the cornea often progressing to perforation of the eyeball with loss of vision.
- In Gonococcal infection extra ocular manifestations like arthritis / septicemia may develop.
- In Chlamydial infection complications such as pneumonia and otitis media may develop.

Prevention of Neonatal Conjunctivitis:

- All women attending antenatal clinics should be assessed for Cervicitis and if positive, should be treated promptly along with partner(s).
- Immediately after delivery, wipe the baby's face and eyes with sterile dry cotton before the eyes are opened.
- Open the baby's eyes by gently parting the upper and lower eyelid
- Apply 1% Tetracycline eye ointment into each inferior conjunctival sac.

Recommendation

During the first visit, the neonate should be treated for conjunctivitis and the parents for Gonorrhea and Chlamydia.

Referral

If the condition worsens or is not improved even after the treatment, at the follow-up visit using appropriate antibiotic; refer the neonate to appropriate facility.

MANAGEMENT OF NEONATAL CONJUNCTIVITIS

To confirm the diagnosis, do the following

Take History

Take history from the mother. Ask mother if she or her partner have any RTI / STI symptoms.

Do Physical Examination

Inspect neonate's eyes for purulent discharge: (Separate or press the eyelids, to look for pus pouring out beneath them)

Treatment of Neonate	Treatment of parents for Urethritis and Cervicitis)
Treatment of Gonococcal Ophthalmia 1. Inj Ceftriaxone 50 mg/kg (maximum 125), IM as a single dose OR Inj Kanamycin 25mg/kg (maximum 75mg), IM as a single dose Cleaning of Neonate's eyes and other advises: Clean Neonate's eyes with saline or clean water, using a clean swab for each eye. Clean from inside to the outside edge of each eye. Wash the hands carefully afterwards.	1. Tab Ciprofloxacin 500 mg, orally as a single dose * OR Inj Ceftriaxone 250 mg, IM as a single dose. 2. Cap Doxycycline 100 mg, orally 12hrly x 7 days* OR Cap Tetracycline 500 mg, orally 6 hourly x 7 days * OR Tab Erythromycin 500 mg, orally 6 hourly x 7 days..
Treatment of Chlamydia 1. Erythromycin Syrup 50 mg/kg/day, orally 6 hourly x 14 days ORCotrimoxazole syrup 1 t.s.f orally 12 hourly x 14 days.	* Should not be prescribed during lactation

Treatment of Neonatal Conjunctivitis

- If possible, single dose treatment should be taken/given at the clinic;
- Persistence of Neonatal Conjunctivitis and parent's Gonorrhea / Chlamydia may be due to resistance to antibiotics, non-compliance of treatment.
- Partner notification card: Give card for the mother's partner coded 'NC' for partner management. Partner to be treated for Urethritis.
- N.B: Neonate's eyes are swollen immediately after delivery and are difficult to open.

VAGINAL DISCHARGE

Vaginal discharge is the most common gynecological complaint of women. A healthy normal woman may have a variable amount of clear and white discharge from the vagina. The

discharge usually increases and becomes more watery when a woman is in the middle of the menstrual cycle. It also increases when she is taking oral contraceptive pills (OCP) or IUCD in place.

Vaginal Discharge is considered to be pathological when there is a change in the quantity, consistency, color or smell of the discharge. Pathological discharge may lead to unusual signs and symptoms like irritation and itching in the genital area; burning micturition; inter menstrual bleeding; pain during intercourse (dyspareunia)

Causes of Vaginal Discharge

Main causes of vaginal discharge are

- Infections of the vagina (Vaginitis) e.g., Candidiasis, Trichomoniasis and Bacterial Vaginosis.
- Infections of the cervix (Cervicitis) e.g., mucopurulent cervicitis by Gonorrhea and / or Chlamydia.
- Simultaneous vaginal and cervical infections.

The most probable cause of a woman complaining of vaginal discharge is Vaginitis. Cervicitis is a less frequent cause of vaginal discharge, but the complications of untreated Cervicitis are much more serious.

Not all infections of the female reproductive tract are transmitted through sexual intercourse. In fact, the most common infections i.e. Candidiasis and Bacterial Vaginosis are not sexually transmitted.

Signs and Symptoms

- Vaginal discharge
- Can be associated with vaginal irritation, itching and soreness.
- If speculum examination is possible, origin and nature of the discharge should be detected:
- Cervicitis is diagnosed if there is endocervical discharge friability of cervix (bleeds easily on gentle touch or swab) or positive risk assessment.
- In Trichomoniasis and Bacterial Vaginosis profuse, watery, foul-smelling and frothy vaginal discharge is seen.
- Candidiasis is diagnosed if curd-like vaginal discharge is found.
- When associated with lower abdominal pain it is suggestive of pelvic inflammatory disease (PID) and the related flowchart is to be followed.
- In the absence of advanced laboratory tests, it is not possible to make a reliable distinction between Gonococcal and Chlamydial cervicitis because:
- Coexistence of Gonococcal and Chlamydial infections is common, and signs / symptoms overlap.

RTI / STI Risk Assessment

Risk Assessment has been incorporated in the flow charts as part of diagnostic criteria for symptomatic women to increase their sensitivity to diagnose Cervicitis

Risk assessment is considered positive if at least one of the following statements is true

- Her partner has symptoms or was recently treated for a RTI / STI
- She is a sex worker
- She has / had more than one sexual partner or a new sexual partner in the past three months.

Vaginal discharge facilitates acquisition and transmission of HIV & AIDS infection. Moreover, if left untreated Gonococcal and Chlamydial cervicitis can lead to serious consequences like

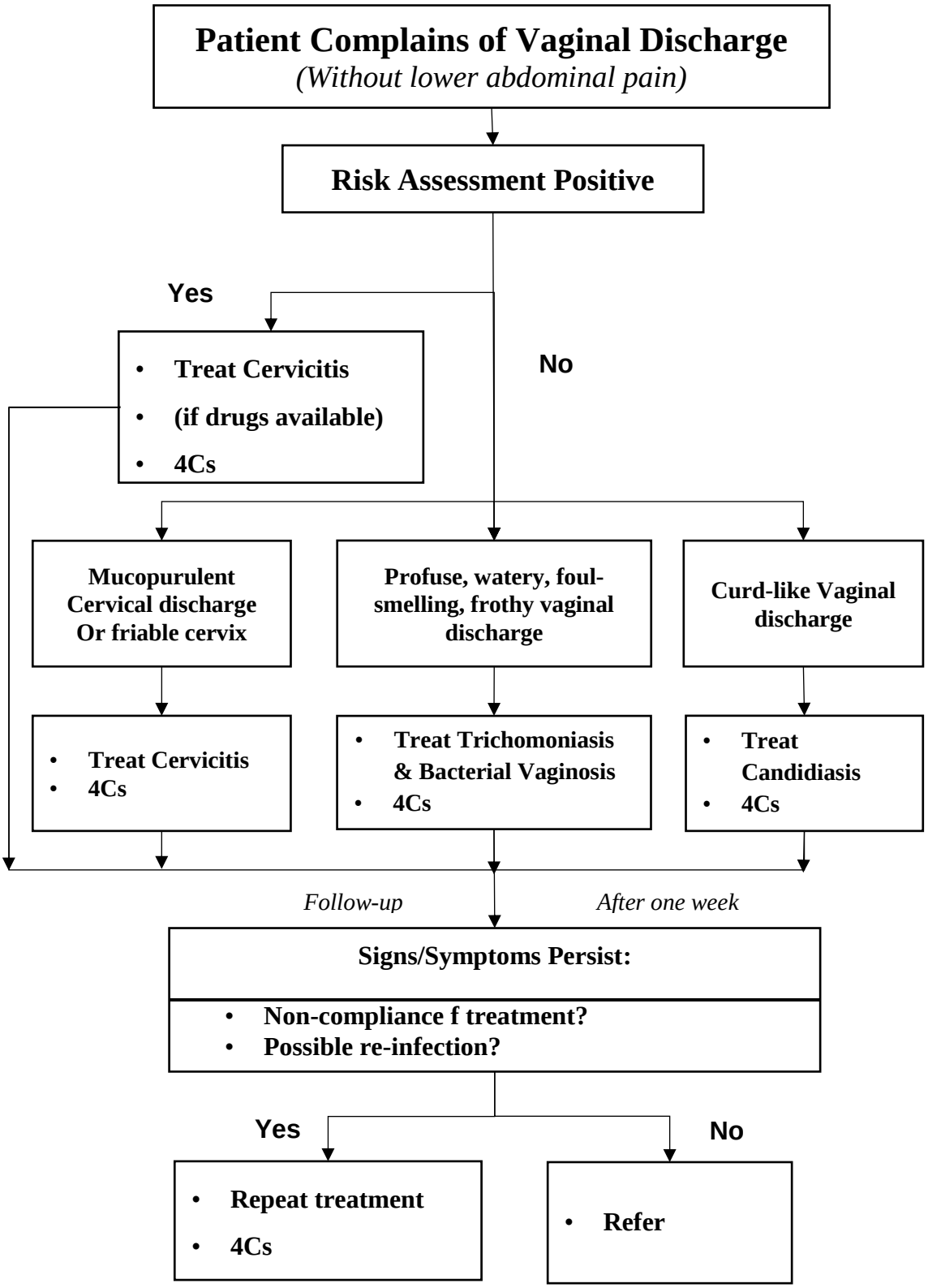
- Pelvic inflammatory disease (PID in10-20% of untreated cases)
- Infertility
- Ectopic pregnancy
- Neonatal infections (Ophthalmia Neonatorum, Pneumonitis)

Referral

If Vaginal Discharge persists even after 1 week of treatment for appropriate duration using proper antibiotic and adherence to 4Cs, refer the patient to appropriate facility.

VAGINAL DISCHARGE

(if Speculum Examination is possible)



MANAGEMENT OF VAGINAL DISCHARGE SYNDROME

(If Speculum Examination is possible) Medical Strategies to Confirm the Syndrome

Take History

- History and nature of vaginal discharge (physiological or pathological).
- Pregnancy history
- Present contraceptive use
- Assess Risk Possibility

Do Physical Examination

- Use a speculum to inspect and examine vagina and cervix to:
- Note type, color, odor, amount and origin of discharge,
- Condition of the cervix (friable or not),
- Look for IUD thread (where applicable)
- Check for other RTI / STI

Use flow chart

Use the same flow chart if vaginal discharge is detected during other services, e.g., IUD, etc.

Treatment of Vaginal Discharge Syndrome

(With Speculum Examination)

Cervicitis	Vaginitis Trichomoniasis & B. Vaginosis	Candidiasis
1. Tab Ciprofloxacin 500 mg, orally as a single *	Tab Metronidazole 2 gm orally as a single dose	Tab Cotrimoxazole
OR	OR	OR
Inj Ceftriaxone 250 mg, IM as a single dose	400 mg, 2 times daily x 7 days	Miconazole 150 mg, intra vaginally for 3 days
PLUS	OR	OR
	Tab Secnidazole 2 gm , orally	
2. Cap Doxycycline 100 mg, orally 12 hourly x 7 days	as a single dose (not to be given in 1st trimester of pregnancy)	Cap Fluconazole 150 mg, orally as a single dose
* OR		
Tab Erythromycin 500 mg, orally 6 hourly x 7 days.		
	If mixed infection is detected provide combined treatment	

* Should not be prescribed during pregnancy or lactation

REMEMBER

- If possible, single dose treatment should be taken/given from the clinic.
- Persistence of vaginal discharge may be due to noncompliance to treatment or possible re- infection.
- Partner notification card: Give card for partner (s) management with diagnostic code "VD", only in case of Cervicitis for treating partner for Urethritis

LOWER ABDOMINAL PAIN IN FEMALE

Lower abdominal pain in female is often due to pelvic inflammatory disease (PID). Pelvic inflammatory disease is often a result of infections that start in the lower reproductive tract (vagina and cervix) and move up into the upper reproductive tract (uterus, fallopian tubes and ovaries) causing varying degrees of endometritis, salpingitis, parametritis and pelvic peritonitis. In the diagnosis of lower abdominal pain in female, two important differential diagnosis that must be considered are acute appendicitis (surgical emergency) and Ectopic pregnancy (gynaecological emergency), which are life threatening. An abnormal discharge may be present for months before developing PID. However, the cervical infection that precedes PID often goes unnoticed and the onset of abdominal or pelvic pain is the first symptom.

Causes of Pelvic Inflammatory Disease

Most PID involves a wide spectrum of bacteria including RTI / STI agents and endogenous flora of the lower genital tract, and are due to

- N. Gonorrhea, 8-10 percent of women with untreated Gonococcal Cervicitis develop PID,
- C. Trachomatis. 8-20 percent with untreated Chlamydial cervicitis develops PID.
- Anaerobic bacteria
- Other causes include
- Gram negative rods
- streptococci
- Postpartum and post abortion ascending infections, although usually related to lack of hygiene and poor obstetric care, may occasionally be associated with Gonococcal and Chlamydial infections.
- The presence of intra-uterine devices (IUD) favors the development of pelvic inflammatory disease, particularly in the month following insertion.

Signs and Symptoms

The primary complaint is lower abdominal or pelvic pain. The pain is usually bilateral and of recent onset. Before making diagnosis of PID some medico-surgical emergencies (e.g. septic abortion, intestinal obstruction, ruptured bowel, appendicitis) and ectopic pregnancy should

be excluded. The main signs / symptoms of PID are

- Lower abdominal pain confirmed by any of the following:
- Abnormal vaginal discharge
- Cervical tenderness/pelvic tenderness
- Temperature > 38°C
- Other possible signs / symptoms.
- Painful intercourse

Complications

Complications may be identified as

- Chronic pain.
- Infertility.
- Ectopic pregnancy.
- Tubo-ovarian abscess, requiring major surgical procedures.
- During her lifetime a women may suffer from several attacks of PID, (which is quite dangerous, since even a single attack of PID can lead to 11 percent of infertility in women).
- Risk of complications during pregnancy is 6-10 times greater in patients with PID. Referral If Lower Abdominal Pain in female worsens after the 3 days follow-up using appropriate antibiotic and adherence to 4Cs, refer the patient to appropriate facility.

MANAGEMENT OF LOWER ABDOMINAL PAIN SYNDROME

Medical Strategies to Confirm the Syndrome

Take History

- History and nature of pain in lower abdomen
- Other symptoms:
- Missed or overdue period
- Recent history of delivery and abortion
- Abnormal vaginal bleeding
- Vaginal discharge
- Contraceptive use
- History of RTI / STI.

Do Physical Examination

- Examine patient’s temperature (38°C or higher indicates infection)

- Palpate the abdomen and look for:
- Tenderness on superficial palpation
- Rebound tenderness on deep palpation (severe tenderness when pressed slowly and then remove the pressure suddenly)
- Abdominal guarding (rigid abdominal muscles)
- If possible, do pelvic examination including bi-manual examination and look for;
- Abnormal vaginal bleeding
- Abnormal vaginal discharge
- Pain during examination (pelvic tenderness/cervical motion tenderness), - Look for IUD thread.
- If possible, check for other RTI / STI.

Treatment of Lower Abdominal Pain Syndrome

- Tab Ciprofloxacin 500 mg, orally as a single dose* or Inj Ceftriaxone 250 mg, IM as a single dose
- Cap Doxycycline 100 mg orally 12 hourly x 14 days* or Tab Erythromycin500 mg orally 6 hourly x 10-14 days
- Tab Metronidazole 400 mg, 2 times daily x 10-14 days (Not to be given in 1st trimester of pregnancy)
- Should not be prescribed during pregnancy or lactation.
- If possible, single dose treatment should be taken/given from the clinic.
- Persistence of lower abdominal pain may be due to:
- Incorrect diagnosis
- Complicated infections
- Non-compliance of treatment.
- If the patient has an intrauterine device (IUD) in place initiate anti-microbial therapy if no response in 72 hours remove the device and start contraceptive counselling.
- Partner notification card: Give card for partner(s) management with diagnostic code PID to be treated for Urethritis.

11.6 KEEPING

11.6 RECORD KEEPING FOR RTIs, STIs and Hepatitis

Like all other diseases, it is important to maintain a record of RTIs / STIs regarding the presenting complaints of the actual client, partner's / husband's symptoms, examination findings and syndromic diagnosis and management / referral; for four visits of the client. A record for Hepatitis B & C will also be kept. The record will be of assistance in finding out the prevalence of STI Infection in a particular area, in calculating its incidence (%), in surveillance, vigilance and prevention of a specific STI. The sample of data sheet is given on page# 174.

RTIs, STIs& HEPATITIS RECORD KEEPING SHEET

Date of Visit	**1ST**	**2^{ND}**	**3^{RD}**	**4^{TH}**
Presenting Complaints				
Vaginal Discharge				
Genital Ulcer				
Lower abdominal Pail in Female Missed /overdue period* or Recent delivery / abortion* or Abdominal vaginal bleeding				
Inguinal Bubo				
Neonate with purulent Eye discharge				
Partner's / Husband's Symptoms				
Urethral Discharge				
Genital Ulcer				
Scrotal Swelling				
Inguinal Bubo				
None				
Examination Findings				

Vaginal Discharge: Profuse /watery / offensive /frothy White curd like Mucopurulent / yellow cervical discharge				
Friable cervix				
Sore / vesicle in the genital area				
Rebound tenderness / Abdominal guarding*				
Pelvic tenderness / cervical motion tenderness				
Enlarged lymph nodes				
Temperature; 100.4-degree F				
None				
Findings of Partner with Scrotal Swelling: Injury to scrotum / history of trauma* Testis rotated / elevated retracted* Hernia / hydrocele*				
Purulent discharge from neonate's eyes				
Syndromic Diagnosis				
Vaginal Discharge: Cervicitis Vaginitis (Trichomoniasis / Candidiasis)				
Genital Ulcer				
Lower abdominal pain in Female (PID)				

Inginal Bubo				
Neonatal Conjunctivitis				
Hepatitis				
Hepatitis B or C				
Refer if any one of the Symptom / sign with * is present				
Management (Treatment and 4C's)				
Management of the actual client				
Management of the partner (if attached)				
4 C's include: advise of drug compliance, Counselling for prevention, condom demonstration. And contact (partner) management.				

11.7 CHECK LIST FOR RECOGNIZING STIs RISK

11.7 CHECK LIST FOR RECOGNIZING STIs RISK

Answering these questions can help a person recognize if he or she is likely to get STIs. The answers also can guide the family planning provider: if the client is likely to get STIs, the client needs a supply of condoms and possibly Spermicides and also counselling about avoiding STIs, recognizing possible symptoms, and getting treatment if symptoms appear. If the client has any symptoms, the clients also need diagnosis and treatment, or referral.

Sex workers and their clients face the highest risk of getting STIs. Among people with lower risk, in many countries STI rates are highest among people under age 20.

CHECK LIST

Ask the Client the Questions Below

Q.1.
Do you have more than one sex partners?

No Yes

Does your partner have more than one sex partners?

No Yes

Have you had any other sex partners in the last several months?

No Yes

Has your partner(s) had any other sex partners in the last several months?

No Yes

Do you sometimes have sex without a condom?

No Yes

Could this happen in the future?

No. Yes

If yes to parts of question 1, the client may be likely to get an STI. Urge the client to use condoms, try to have a mutually faithful relationship, or abstain. If yes, to all parts of question 1, go to ask question 2 and 3.

Q.2

For A Woman	**For A Man**
Do you have any of the following?	Do you have any of the following?
Unusual discharge from your vagina?	Pain or burning when you urinate?
No Yes	No Yes

Itching or sores in or around your vagina?

No Yes

Open sores anywhere in your area?

No Yes

Pain or burning when you urinate?

No Yes`

Pus coming from your penis?

No Yes

Pain lower abdomen

No Yes

Swollen testicles or penis

No Yes

Q.3

Do you think your sex partner might have an STI? Does he / she have open sores anywhere in the genital area? Does he have pus coming from his penis? OR Does she have an unusual discharge from her vagina?

If YES to any parts of question 1 and either 2 or 3, these symptoms may be caused by an STI. Diagnose and treat, or refer. Urge that the client avoid sex until 3 days after treatment is done and symptoms are gone. Urge these clients to bring or send their sex partners for care.

	Task/Activity	Rating				
		0	1	2	3	N/A
	Preparation for counselling:					
1.	Ensures room is well-lit and ventilated					
2.	Ensures availability of chairs and tables					
3.	Assembles teaching aids (posters, pamphlets, etc)					
4.	Ensures availability of writing materials (client file, daily activity register, follow-up cards, etc)					
5.	Greets client/couple respectfully and with kindness; makes client comfortable: a) Offers seat b) Provides privacy where necessary c) Assures clients of confidentiality					
6.	Introduces self					

7.	Reassures the client that the information in the counselling session is confidential					
8.	Listens to the client actively; give client complete attention					
9.	Uses body language to show interest in and concern for the client					

SECTION TWELVE

INFERTILITY

12.1 SUBFERTILITY

12.1 SUBFERTILITY

Infertility:

This strictly applies to the condition in which it is proved that pregnancy is impossible. This was the term commonly used in the past, but the consensus now is to use sub fertility, rather than infertility

Sub Fertility:

It is the inability of a couple in the reproductive age to conceive pregnancy, within twelve months of unprotected and regular intercourse. It excludes the period during which contraception is used. defined as failure to achieve pregnancy within 12 months of unprotected intercourse or therapeutic donor insemination in women younger than 35 years or within 6 months in women older than 35 years, affects up to 15% of couples. According to this criterion, 20% of couples are sub fertile, though this falls to 10% after 18 months. Most couples seeking help are in fact sub fertile rather than infertile. Some may have normal fertilizing potential. Infertility is classified as primary and secondary.

Primary sub fertility –

Those who have never conceived in the past and who have regular, unprotected intercourse for 12 months.

Secondary sub fertility –

Those who have conceived in the past and who have regular, unprotected intercourse for 12 months but are now facing difficulty to conceive.

Epidemiology:

In approximately one third of cases male factors are responsible, in another third the female factors and in the remainder third a combination of factors is involved, for instance a low sperm count in association with defective ovulation. It is therefore vitally important that sub infertility be investigated as a problem of the couple and not of one partner.

HUMAN SIDE OF SUB FERTILITY

One of the most important and underappreciated reproductive health problems in developing countries is the high rate of infertility and childlessness The inability to procreate is frequently considered a personal tragedy and a curse for the couple, impacting on the entire family and even the local community. Negative psychosocial consequences of childlessness are common and often severe In many cultures, womanhood is defined through motherhood and infertile women usually carry the blame for the couple's inability to conceive. Moreover, in the absence of social security systems, older people are economically completely dependent on their children. Childless women are frequently stigmatized, resulting in isolation, neglect, domestic violence and polygamy

Motherhood is a natural privilege for women. Children, especially boys, give the woman status as well as psychological and emotional security within the patriarchal family.

Childlessness is associated with stigmatization, social isolation and sometimes violence. Even in the case of male infertility, women usually bear the negative consequences of their inability to conceive. The problem of infertility often has a gender dimension to it. has to be interpreted in a context of poverty, class and gender inequality and unequal access to health-care resources. It is estimated that ~70% of pelvic infections are caused by STDs while the other 30% are attributable to pregnancy-related sepsis (Similarly, most cases of male factor infertility are caused by previous infections of the male genitourinary tract)

BASIC EVALUATION

. An infertility evaluation may be offered to any patient who by definition has infertility or is at high risk of infertility. Women older than 35 years should receive an expedited evaluation and undergo treatment after 6 months of failed attempts to become pregnant or earlier, if clinically indicated. In women older than 40 years, more immediate evaluation and treatment are warranted Additionally, if a woman has a condition known to cause infertility, the obstetrician–gynaecologist should offer immediate evaluation

Indications for immediate evaluation include the following:

- oligomenorrhea or amenorrhea
- known or suspected uterine, tubal, or peritoneal disease
- stage III or stage IV endometriosis and
- known or suspected male infertility

Table 1. Basic Infertility Evaluation

Female		
History		
Physical		
Prepregnancy evaluation*		
Additional evaluation for etiology of infertility	Diminished ovarian reserve	• Antimüllerian hormone or basal follicle-stimulating hormone plus estradiol • Transvaginal ultrasonography with antral follicle count
	Ovulatory dysfunction	Ovulatory function test (eg, serum progesterone measurement)
	Tubal factor	• Hysterosalpingography • Hysterosalpingo-contrast sonography
	Uterine factor	• Transvaginal ultrasonography • Sonohysterography • Hysteroscopy • Hysterosalpingography
Male		
History		
Semen analysis		

*See the following document for guidance on prepregnancy evaluation: Prepregnancy counseling. ACOG Committee Opinion No. 762. American College of Obstetricians and Gynecologists. Obstet Gynecol 2019;133:e78–89.

An infertility evaluation may be offered to any patient who has infertility or is at high risk of infertility. Women older than 35 years should receive an expedited evaluation and undergo treatment after 6 months of failed attempts to become pregnant or earlier, if clinically indicated. In women older than 40 years, more immediate evaluation and treatment are

warranted.

If a woman has a condition known to cause infertility, the obstetrician–gyna- ecologist should offer immediate evaluation. Essential components of an initial workup include a review of the medical history, physical examination, and additional tests as indicated. For the female partner, tests will focus on ovarian reserve, ovulatory function, and structural abnormalities. Imaging of the reproductive organs provides valuable information on conditions that affect fertility. Imaging modalities can detect tubal patency and pelvic pathology and assess ovarian reserve.

Male factor is a cause of infertility in 40–50% of couples. Given the high prevalence of male factor in infertile heterosexual couples, a basic medical history and evaluation of the male partner are warranted from the outset. A women's health specialist may reasonably obtain the male partner's medical history and order the semen analysis. It is also reasonable to refer all male infertility patients to a specialist with expertise in male reproductive medicine. Unexplained infertility may be diagnosed in as many as 30% of infertile couples. At a minimum, these patients should have evidence of ovulation, tubal patency, and a normal semen analysis.

REFER URGENTLY:

Refer the couple urgently in case of any of the following situations It is equally important to offer infertility evaluation to any patient who by definition has infertility or is at high risk of infertility.

- Women older than 35 years should receive an expedited evaluation and undergo treatment after 6 months of failed attempts to become pregnant or earlier, if clinically indicated. In women older than 40 years, more immediate evaluation and treatment are warranted. If a woman has a condition known to cause infertility, the obstetrician–gynecologist should offer immediate evaluation.
- A comprehensive medical history, including items relevant to the potential etiologies of infertility, should be obtained from the patient and partner, should one exist.
- A targeted physical examination of the female partner should be performed with a focus on vital signs and include a thyroid, breast, and pelvic examination.
- For the female partner, tests will focus on ovarian reserve, ovulatory function, and structural abnormalities.
- Imaging of the reproductive organs provides valuable information on conditions that affect fertility. Imaging modalities can detect tubal patency and pelvic pathology and assess ovarian reserve.
- A women's health specialist may reasonably obtain the male partner's medical history and order the semen analysis. Alternatively, it is also reasonable to refer all male infertility patients to a health care specialist with expertise in male reproductive medicine.

Female Factor Infertility

The obstetrician–gynecologist often is the first health care provider women will seek for

evaluation or concerns about fertility. Essential components of an initial workup include a review of the medical history, physical examination, and additional tests as indicated.

CAUSES OF FEMALE INFERTILITY

Ovulatory Factors:

The ovaries release ova on a cyclical basis and secrete steroid hormones that influence tissues in the reproductive tract. This ovarian function may be impaired due to disorders of hypothalamus and pituitary, such as obesity, anorexia nervosa and dwarfism

Tubal Factors:

The Fallopian tubes are responsible for efficient transfer of ova and sperms fostering their approximation. Causes of tubal block are:

Infection: Post abortion, post-partum, tuberculosis, gonococcal and Chlamydia.

Adhesions due to previous pelvic surgery, recurrent PID and advanced endometriosis.

Congenital defects in the Fallopian tubes.

Cervical Factors: The cervix is the first major barrier encountered by sperms after arrival in the female reproductive tract. Abnormalities of the cervix or cervical mucus lead to sub fertility e.g.

- Unfavorable cervical mucus
- Anatomical defects of cervix
- Abnormalities in cervical canal

Uterine Factors:

- The uterus provides a suitable environment for implantation of the fertilized ovum in the second half of the menstrual cycle. This process can be disrupted by an
- Unreceptive endometrium
- Altered uterine cavity because of congenital defects, fibroids or tuberculosis endometritis Immunological Factors: The ova, sperms, fertilized egg and other secretions are all potentially antigenic which may impair fertilization.

History

A comprehensive medical history, including items relevant to the potential etiologies of infertility, should be obtained from the patient and partner, should one exist. Key historical factors to elicit from the patient include the following:

1) duration of infertility and results of any previous evaluation and treatment
2) menstrual history (including age at menarche, cycle interval, length, and characteristics; presence of molimina [mild premenstrual symptoms and changes]; and onset and severity of dysmenorrhea), signs of ovulation including positive

ovulation tests, cervical mucus changes, or biphasic basal body temperatures

3) pregnancy history (gravidity, parity, time to pregnancy, fertility treatments, pregnancy outcome, delivery route, and associated complications)
4) previous methods of contraception
5) coital frequency and timing
6) sexual dysfunction
7) past surgery (procedures, indications, and outcomes) focused on abdominal and pelvic procedures
8) previous hospitalizations, serious illnesses, or injuries
9) gynaecologic history (eg, pelvic inflammatory disease, sexually transmitted infections, endometriosis, leiomyomas)
10) Sexual history
11) review of organ systems, including history of thyroid disease, galactorrhea, hirsutism, pelvic or abdominal pain, and dyspareunia
12) previous abnormal cervical cancer screening tests and any subsequent treatment
13) current medications and supplements, with an emphasis on identifying allergies and potential teratogens
14) family history of birth defects, developmental delay, early menopause, or reproductive problems
15) occupation and exposure to known environmental hazards and
16) use of nicotine products, alcohol, and recreational or illicit drugs

Physical Examination

A targeted physical examination of the female partner should be performed with a focus on vital signs and include a thyroid, breast, and pelvic examination. Key physical factors include the following

- weight, body mass index, blood pressure, and pulse
- thyroid enlargement and presence of any nodules or tenderness
- breast secretions and their character
- signs of androgen excess
- tanner staging of breasts and pubic and axillary hair
- vaginal or cervical abnormality, secretions, or discharge
- pelvic or abdominal tenderness, organ enlargement, or masses
- uterine size, shape, position, and mobility
- adnexal masses or tenderness and
- cul-de-sac masses, tenderness, or nodularity

INVESTIGATING FEMALE INFERTILITY

It is based on assessment of factors which may delay or prevent fertility in women.

Ovulation/Ovulatory function:

Knowledge of the time of ovulation is increasingly important in the treatment of some causes of infertility, because conception is most likely to occur on this day. If the day of ovulation in the menstrual cycle is known, then the couple is advised to have intercourse accordingly. Most methods designed to assess ovulation depend on the detection of progesterone production. The client is referred to the gynaecologist for special investigations to detect occurrence of ovulation.

Tubal Factors:

The patency of the Fallopian tubes which facilitates ovum transport can be evaluated in three ways for which the client is referred to the Gynaecologist after the procedure has been explained briefly.

Hysterosalpingography (HSG).

The HSG is usually performed in the follicular phase of the cycle. This test assesses both uterine anomalies and tubal patency. Proximal and distal tubal occlusion, peritubal adhesions, and salpingitis isthmica nodosa may be seen with HSG.

Hysterosalpingo Contrast Sonography.

Is a recent innovation for which vaginal probe is required. Under transvaginal ultrasound scanning, a galactose solution is injected into the uterus and passes along the Fallopian tubes, which delineates them more accurately than hysterosalpingography using a radio-opaque substance.

Hysteroscopy:

Direct visualization of the uterine cavity by hysteroscopy provides the most definitive method for diagnosis of endometrial polyps, uterine synechiae, and submucosal fibroids. Hysteroscopy is not as commonly used for initial evaluation of women with infertility because of cost and access considerations.

Laparoscopy. Laparoscopy allows direct visualization of the Fallopian tubes to identify abnormalities in structure or location and detect peritubal adhesions. This is done under General anesthesia in an operation theatre.

Uterine Factor:

Hysterosalpingography, hysteroscopy and ultra-sonography done for patency of tubes can simultaneously be used to assess the uterus for intrauterine adhesions, etc.

Cervical Factor:

Cervical mucus normally changes from a viscid plug to a copious clear fluid under the

influence of progesterone at ovulation in order to facilitate the passage of sperm. Assessment of cervical factors is based on the evaluation of the quality and quantity of cervical mucus and ability of sperms to penetrate and survive in the mucus. To investigate the client is again referred to the gynaecologist

Mixed Agglutinin Reaction (MAR). Human red cells are sensitized with IgG and mixed with sperm. If the spermatozoa are coated with antibody, the mixed agglutinates will be visible. However, the value of these tests is unclear, and the predictive value is poor.

Additional Evaluation for Etiology of Infertility

The infertility workup includes laboratory and imaging tests. For the female partner, tests will focus on ovarian reserve, ovulatory function, and structural abnormalities

Infertility Tests That Should Not Be Routinely Ordered

- Laparoscopy for unexplained infertility
- Advanced sperm function testing (eg, DNA fragmentation testing)
- Postcoital testing
- Thrombophilia testing
- Immunologic testing
- Karyotype
- Endometrial biopsy
- Prolactin

Male Factor Infertility

Male factor is a cause of infertility in 40–50% of couples Given the high prevalence of male factor in infertile heterosexual couples, a basic medical history and evaluation of the male partner are warranted from the outset. The minimal evaluation of the male partner includes a reproductive history and semen analysis. A women's health specialist may reasonably obtain the male partner's medical history and order the semen analysis. Alternatively, it is also reasonable to refer all male infertility patients to a health care specialist with expertise in male reproductive medicine. Any abnormality noted on the male history or semen analysis warrants referral to a specialist trained in male infertility (eg, a reproductive urologist or reproductive endocrinologist) for a complete evaluation

CAUSES OF MALE INFERTILITY

Defective Spermatogenesis

which could be in the form of azoospermia (absence of spermatozoa in the semen) or oligospermia (less than normal number of spermatozoa in semen).

Chromosomal abnormalities

usually cause azoospermia. The most common is Klinefelter's syndrome (XXY) when testes

fail to develop or are under-developed. Undescended testes exposed to high temperature of the abdominal cavity leads to suppression of spermatogenesis.

Testicular Damage:

Damage to testes from trauma, surgery, irradiation, neoplasm and infection such as mumps, T.B. syphilis.

Suppression of spermatogenesis

Is another cause that may be due to hydrocele, varicocele, repeated hot baths, working in hot environment, any severe acute or chronic illness or use of cytotoxic drugs.

Obstruction in Passage,

Anywhere from epididymis to the opening of the ejaculatory ducts into the urethra causes azoospermia.

Ejaculatory Dysfunction / Incompetence

Where there is failure to deposit semen in the posterior fornix of the vagina which may be due to

- Psychosexual problems: Temporary impotence, permanent impotence, premature ejaculation or particular partner impotence.
- Anatomical anomalies of urethra
- Phimosis or pain during erection.

Immunological Factors:

Presence of anti bodies can also lead to defective sperm production

Other Factors are:

- Smoking
- Alcohol
- Drugs
- Psychological Factor
- Environmental Factor
- High viscosity of semen
- Increased/Decreased Volume of semen

History

The following list details the specific key male historical factors to elicit

- coital frequency and timing
- any evidence of sexual dysfunction, including erectile or ejaculation issues

- duration of infertility
- prior fertility
- childhood illness and developmental history
- systemic medical illness
- previous surgery (eg, cryptorchidism with or without surgery)
- medication use, including anabolic steroids and supplements (eg, testosterone), and allergies
- sexual history and sexually transmitted infections and
- exposure to gonadal trauma or toxins.

INVESTIGATING MALE INFERTILITY:

Assessment of male factors includes the following:

Semen Analysis:

Semen analysis is the quantitative microscopic evaluation of sperm parameters. This is the basic most useful and widely available test for male infertility. It should be carried out before any further investigations on the couple. Average values are assessed on three samples produced over several weeks, as quality is variable. Two to five days of abstinence are optimal before semen analysis. Ideally, the sample is obtained by masturbation in the laboratory collection room. Semen collection at home is possible if the sample is transported at room or body temperature for evaluation within 1 hour.

Abnormalities on semen analysis warrant repeat testing and further investigation If the first seminal appraisal is abnormal, two further specimens should be evaluated before a prognosis is made. If satisfactory, the man is assumed to be potentially fertile.

Standard for a normal seminal specimen have been developed by the World Health. Organization (WHO) and are as follows:

	WHO reference range
Total sperm count in ejaculate	39–928 million
pH	7.2 or more
Ejaculate volume	1.5–7.6 mL
Sperm concentration	20 million/ ml or more

Total vitality	58% or more live spermatozoa
Total motility (progressive and non-progressive)	40–81 percent
Progressive motility	32–75 percent
total motility (percentage of progressive motility and non-progressive motility):	40% or more motile or 32% or more with progressive motility
Sperm morphology(normal)	4 percent or more

The reference ranges are only valid for the semen analysis tests outlined by the World Health Organization.

Evaluation of Semen.

Evaluation of the samples permits the specimens to be graded as:

Normozoospermia: Normal ejaculates as defined by the reference values.

Oligozoospermia: A count of less than 20 million sperm per ml

- With normally motile sperm.
- With asthenospermia.

Severe oligospermia: A count of less than 5 million sperm in total specimen.

Azoospermia: Absence of spermatozoa in the semen.

Asthenospermia: Less than the reference value for motility, with normal sperm count.

Aspermia: No ejaculate.

Teratozoospermia: Less than the reference value for morphology.

Oligoasthenoterato-zoospermia: Signifies disturbance of all three variables.

Agglutination of sperm in the semen specimen may be due to:

Antisperm antibodies, particularly if the man has had a vasectomy reversal or testicular trauma. Intrauterine insemination with the washed sperm may be successful.

Infection, viral or bacterial. If bacterial, it may respond to appropriate treatment.

Blood tests for hormone Assay:

Blood is drawn to measure various hormonal levels for both male and female e.g. serum FSH, LH, Testosterone, TSH, etc.

Testicular biopsy::

If severe oligospermia is diagnosed, and the testicular volume and the FSH levels are normal, a testicular biopsy is sometimes done which will show whether sperm are actually being produced. If they are, the problem is presumably one of defective transport.

Post Coital Test (PCT):

Is done to test the fertilizing capacity of spermatozoa.

Chromosomal Studies:

From blood or buccal smear may reveal Klinefelter's syndrome (XXY) which always results in sterility.

Unexplained Infertility

Unexplained infertility may be diagnosed in as many as 30% of infertile couples This refers to the failure of a couple to establish a pregnancy when a specific cause cannot be identified, even after utilizing currently available and acceptable diagnostic methods. All tests are normal. There is substantial number of couples with unexplained factors. At a minimum, these patients should have evidence of ovulation, tubal patency, and a normal semen analysis

History Taking:

Both Partners: History from both partners must include following details

- Occupation: Occupational hazardous industrial pollutants or radioactive materials, working in hot environment or wearing tight uniforms/ pants/underwear's
- Duration of Marriage
- Duration of Infertility, whether primary or secondary
- Previous Contraception (IUCD, Oral Pills, Condoms, etc.)
- Previous Surgery
- Sexually Transmitted Diseases
- Pre-Marriage menstrual history
- Sexual lifestyle
- Psychological factors

Particular attention is paid to other social causes which may result in obstruction of the uterine or seminal tubes.

- Drug History
- Lifestyle
- Medical problems
- Smoking

- Alcohol Intake
- Family History

Male engagement:

Men, often viewed as less willing to access reproductive health care, will do so when concerned about a fertility problem; and, may support and access health care if their partner is unable to become pregnant. Global prevalence of male infertility is unknown

PREVENTION OF INFERTILITY

Prevention is always better than cure. Prevention from causes of infertility has double importance because the treatment is expensive, and its results are uncertain. The prevalence of infertility can be reduced by controlling RTIs through education of the people; preventing postpartum infections by advocating deliveries through trained providers; preventing post-abortion infections by promoting effective contraception and offering treatment for post abortion complications; controlling endemic infections of the reproductive tract; ensuring evaluation and treatment of men; advising about the timing of intercourse; and providing thorough work-ups from selected facilities.

Although some causes of infertility cannot be prevented, public health programs can prevent much infertility that is due to infection by paying more attention to the following major reasons of infection:

- Sexually Transmitted Infections (STIs).
- Poor obstetric care.
- Induced abortion.

Unsafe abortion practices

Worldwide estimates for 1995 indicate that ~20 million illegal abortions took place every year and almost all unsafe abortions (97%) occur in developing countries Unsafe abortions are commonly carried out by unqualified personnel without the requisite skills, or in unsafe and unsterile conditions. Even if performed under legal circumstances abortion practices are, however, often not within the required standard of care. In the case of complications, access to appropriate medical treatment is often insufficient

Post-partum pelvic infections

Post-partum pelvic infections are extremely common in developing countries. They are often the result of lack of access to appropriate medical care, especially in rural areas. Home deliveries, performed in unhygienic circumstances by inadequately trained or equipped birth attendants, increase the risk of complications and post-partum infections dramatically.

The most important complications of obstructed or unassisted labour are trauma and sepsis, both of which increase the risk of future infertility. In addition, obstetric fistulas may also compromise reproductive potential. The mechanisms involve chronic inflammation as well as social isolation, which these women often suffer as a result of incontinence and subsequent

rejection by their husband, family and community.

12.2 ROLE OF FWW IN MANAGEMENT

12.2 ROLE OF FWW IN MANAGEMENT OF INFERTILITY

The role of FWW is very important in managing sub fertility. Sub fertility is not only a physical disease but also causes immense worry and psychological problems. A professional approach is needed while making sure that the woman feels comfortable and is given privacy and confidentiality.

Explain to the female client / couple that everything possible will be done to help and for this purpose their co-operation will be required.

Clinical approach

Take a thorough history of both wife and husband.

- Conduct a detail examination of the women.
- Look for and treat any minor disorder / ailment / infection.
- Educate the couple on personal hygiene, balanced diet and general health.
- Advise woman / husband (or both) to resort to good habits and give up excessive smoking or alcohol, if any one indulges in it.
- Counsel / advice on avoidable causes like wearing tight trousers/under wears, working in hot environment, smoking etc.
- Discuss paying attention to good balanced diet and general health which helps spermatogenesis and improves the sperm count.
- Guide the couple to a proper facility which deals specially in treatment of infertility
- Help to calculate the time of ovulation in the woman and ensure the best utilization of the fertile days of ovulation.
- Advise the couple for coitus accordingly.
- Counsel the couple on the required investigations.
- Inform the couple about the modern/innovative Assisted Reproductive Technologies for conceiving which are rather expensive and only available at clinics / hospitals offering high tech techniques.
- Encourage the couple for return visits to get or give information about the progress.
- Mention the possibility of adoption of a child in case of failure of treatment or if no cause is found in both partners i.e., unexplained infertility.

Supportive Role of Husband in infertility:

The husband has a vital role to play in a case of infertility and should be counselled to realize that:

- The cause can be in either partner
- Reduce the stress on his wife & if required move her to a different environment.
- Facilitate her to visit infertility centre, which offers services for infertile couples

- Discuss the matter / progress with his wife as frequently as possible in a friendly atmosphere.
- Coitus shall be scheduled in relation to the fertile period of his wife for better chances of conception.
- Ensure her of his support throughout the process of investigations, treatment and advice given by medical specialist.
- Mention the possibility of adoption of a child in case of failure of treatment or if no cause is found in both partners i.e. unexplained infertility.

COMBATING MYTHS AND MISCONCEPTIONS OF INFERTILITY

Myths and misconceptions about the causes of infertility are common among both men and women.

Infertility, in some communities, is attributed to witchcraft, punishment from God, or angry ancestors.

Some misconceptions can lead to more serious health consequences. In some communities, infertility is attributed to the use of some methods of contraception.

Many women are reluctant to use modern contraceptives due to the fear of infertility. This, however, increases the risk of unintended pregnancy and the associated risks of post partum infections or unsafe abortions. In addition, in some instances family planning providers hold these misconceptions as well.

Increased attention needs to be given to heightening awareness of the link between STIs and infertility, Recently researchers have suggested incorporating infertility into efforts to promote dual protection against unintended pregnancy, STIs/HIV, and infertility, researchers hope to draw attention to the often neglected issue of infertility and to increase the links between reproductive health and STI prevention efforts.

In addition, health providers and program managers can help clients safeguard their health by providing education on the biological causes of infertility and the links between untreated or improperly treated STIs and infertility

12.3 ASSISTED REPRODUCTIVE TECHNOLOGIES

12.3 ASSISTED REPRODUCTIVE TECHNOLOGIES

These technologies, that is In Vitro Fertilization IVF and its variants have added a new dimension to the treatment of the infertile couple. In the past decade considerable advances have been made in reducing the pain involved, the invasiveness of the procedure and the cost. The various technologies used are as follows:

- Artificial insemination by Husband (AIH)
- Artificial Insemination by Donor (AID / DI) used in some western countries.
- In Vitro Fertilization / Embryo Transfer (IVF / ET)
- Gamete Intra Fallopian Transfer (GIFT)
- Zygote Intra Fallopian Transfer (ZIFT)
- Intra Cytoplasmic Sperm Injection (ICSI)

Treatment

Treatment will depend on many factors, including the age of the person who wishes to conceive, how long the infertility has lasted, personal preferences, and their general state of health.

Frequency of intercourse

The couple may be advised to have sexual intercourse more often around the time of ovulation. Sperm can survive inside the female for up to 5 days, while an egg can be fertilized for up to 1 day after ovulation. In theory, it is possible to conceive on any of these 6 days that occur before and during ovulation.

However, a survey has suggested that the 3 days most likely to offer a fertile window are the 2 days before ovulation plus the 1 day of ovulation.

Some suggest that the number of times a couple has intercourse should be reduced to increase sperm supply, but this is unlikely to make a difference.

Fertility treatments for women

Fertility drugs might be prescribed to regulate or induce ovulation.

They include:

- Clomifene (Clomid, Serophene): This encourages ovulation in those who ovulate either irregularly or not at all, because of PCOS or another disorder. It makes the pituitary gland release more follicle-stimulating hormone (FSH) and luteinizing hormone (LH).
- Metformin (Glucophage): If Clomifene is not effective, metformin may help women with PCOS, especially when linked to insulin resistance.
- Human menopausal gonadotropin, or hMG (Repronex): This contains both FSH and LH. Patients who do not ovulate because of a fault in the pituitary gland may receive

this drug as an injection.

- Follicle-stimulating hormone (Gonal-F, Bravelle): This hormone is produced by the pituitary gland that controls estrogen production by the ovaries. It stimulates the ovaries to mature egg follicles.
- Human chorionic gonadotropin (Ovidrel, Pregnyl): Used together with clomiphene, hMG, and FSH, this can stimulate the follicle to ovulate.
- Gonadotropin-releasing hormone (Gn-RH) analogs: These can help women who ovulate too early—before the lead follicle is mature—during hmG treatment. It delivers a constant supply of Gn-RH to the pituitary gland, which alters the production of hormone, allowing the doctor to induce follicle growth with FSH.
- Bromocriptine (Parlodel): This drug inhibits prolactin production. Prolactin stimulates milk production during breastfeeding. Outside pregnancy and lactation, women with high levels of prolactin may have irregular ovulation cycles and fertility problems.

Reducing the risk of multiple pregnancies

Injectable fertility drugs can sometimes result in multiple births, for example, twins or triplets. The chance of a multiple birth is lower with an oral fertility drug.

Careful monitoring during treatment and pregnancy can help reduce the risk of complications. The more fetuses there are, the higher the risk of premature labor.

If a woman needs an HCG injection to activate ovulation and ultrasound scans show that too many follicles have developed, it is possible to withhold the HCG injection. Couples may decide to go ahead regardless of if the desire to become pregnant is very strong.

If too many embryos develop, one or more can be removed. Couples will have to consider the ethical and emotional aspects of this procedure.

Surgical procedures for women

If the fallopian tubes are blocked or scarred, surgical repair may make it easier for eggs to pass through.

In case of Endometriosis, it may be treated through laparoscopic surgery. A small incision is made in the abdomen, and a thin, flexible microscope with a light at the end, called a laparoscope, is inserted through it. The surgeon can remove implants and scar tissue, and this may reduce pain and aid Assisted conception

The following methods are currently available for assisted conception.

Intrauterine insemination (IUI)/ Artificial Insemination by Husband (AIH):

When due to some cause or inability the fertilization cannot occur naturally, the semen from husband is taken, processed to get a concentrated sperm solution , which is then deposited in the uterine cavity via a small flexible catheter. At the time of ovulation, a fine catheter is inserted through the cervix into the uterus to place a sperm sample directly into the uterus. The sperm is washed in a fluid and the best specimens are selected. The woman may be

given a low dose of ovary stimulating hormones.IUI is more commonly done when the man has a low sperm count, decreased sperm motility, or when infertility does not have an identifiable cause. It can also help if a man has severe erectile dysfunction.

The indications for this method are:

- Impotence
- Retrograde ejaculation
- Severe hypospadias
- Localized cervical or uterine problem
- Infrequent or absent sexual intercourse

In Vitro Fertilization / Embryo Transfer (IVF / ET):

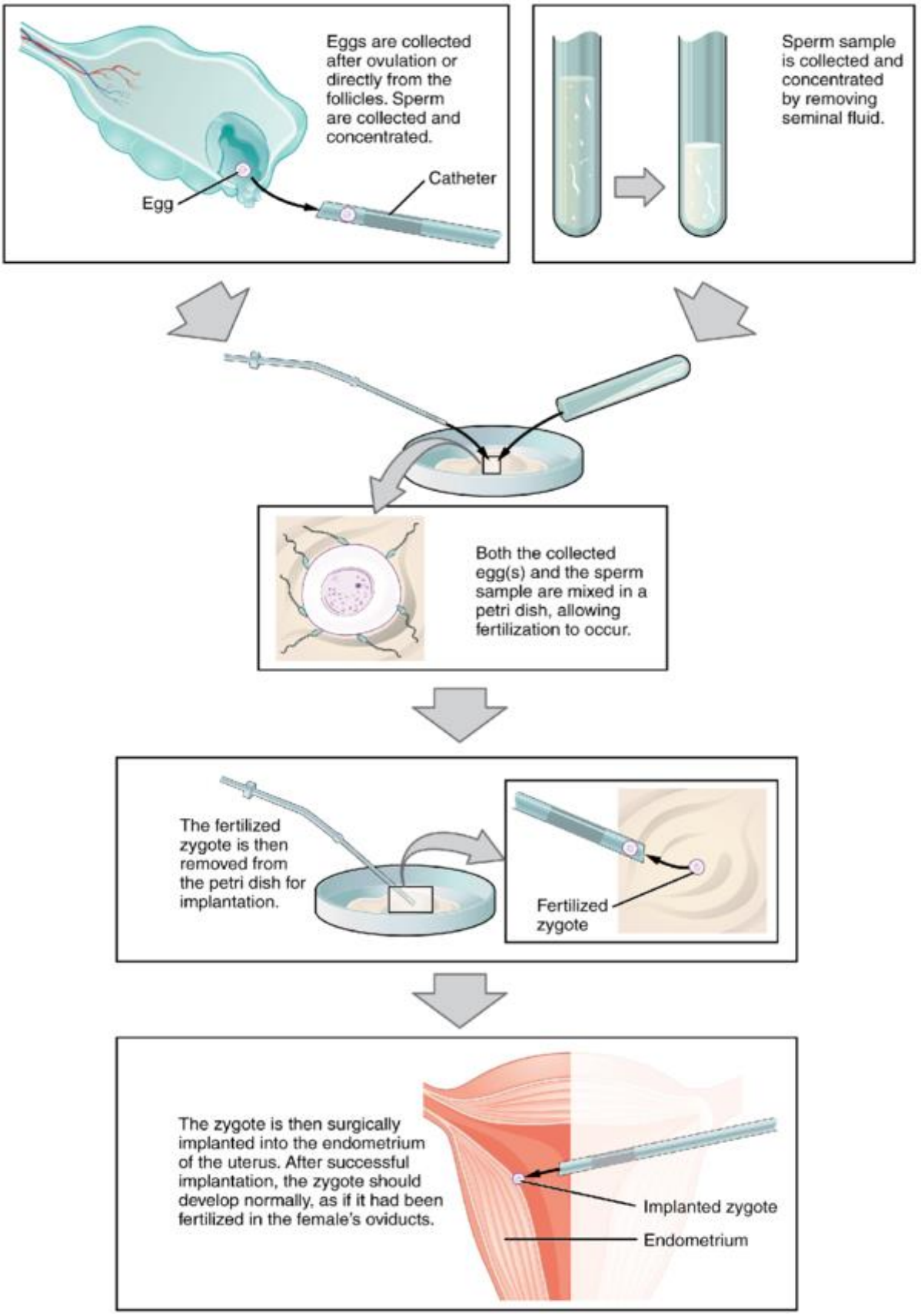
In IVF, which stands for in vitro fertilization, is an assisted reproductive technology. In vitro, which in Latin translates to “in glass,” refers to a procedure that takes place outside of the body. There are many different indications for IVF. For example, a woman may produce normal eggs, but the eggs cannot reach the uterus because the uterine tubes are blocked or otherwise compromised. A man may have a low sperm count, low sperm motility, sperm with an unusually high percentage of morphological abnormalities, or sperm that are incapable of penetrating the zona pellucida of an egg.

The fertilization takes place outside the body of the woman and then two (occasionally three) fertilized eggs are transferred into the uterus. The indications for this method are:

- Oligospermia,
- Poor sperm motility
- Antisperm antibodies.
- Tubal blockage or damage
- Endometriosis.
- Cervical problems.
- Unexplained infertility.

Success Rate:

The rate of success for IVF is correlated with a woman’s age. More than 40 percent of women under 35 succeed in giving birth following IVF, but the rate drops to a little over 10 percent in women over 40. Success rate of a single IVF procedure, in terms of a live, healthy baby varies between 30-40%%. Sperm are placed with unfertilized eggs in a petri dish, where fertilization can take place. The embryo is then placed in the uterus to begin a pregnancy. Sometimes the embryo is frozen for future use.A typical IVF procedure begins with egg collection. In parallel, sperm are obtained from the male partner or from a sperm bank. Next, the eggs and sperm are mixed in a petri dish.



IVF. In vitro fertilization involves egg collection from the ovaries, fertilization in a petri dish, and the transfer of embryos into the uterus.

Gamete Intrafallopian Transfer (GIFT):

The gametes (of sperms or ovum) are transferred into the fallopian tube where fertilization occurs.

The indications for this method are:

- Moderate oligospermia
- Endometriosis

Success Rate:

The success rate of a single GIFT procedure is about 20%. If this procedure is repeated 5 times, the cumulative 'take-home baby' rate is about 50%.

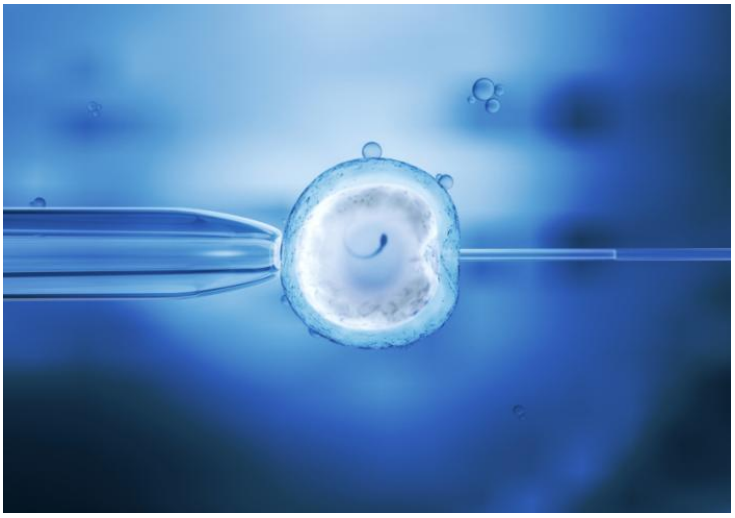
Zygote Intrafallopian Transfer (ZIFT):

Ova are fertilized in vitro and the embryos are then introduced into the fallopian tube.

Intracytoplasmic sperm injection (ICSI):

Intra-cytoplasmic sperm injection (ICSI) offers new hope to couples where the male partner is diagnosed with very poor semen characteristics and who have undergone one or more cycles of standard IVF procedure.

If there are severe problems with the sperm—for example, the count is exceedingly low, or the sperm are completely nonmotile, or incapable of binding to or penetrating the zona pellucida—a sperm can be injected into an egg.



ICSI

A single sperm is injected into an egg to achieve fertilization during an IVF procedure. The likelihood of fertilization improves significantly for men with low sperm concentrations.

The embryos are then incubated until they either reach the eight-cell stage or the blastocyst stage. In the United States, fertilized eggs are typically cultured to the blastocyst stage because this results in a higher pregnancy rate. Finally, the embryos are transferred to a woman's uterus using a plastic catheter (tube

Artificial Insemination by Donor (AID / DI)/Sperm or egg donation:

This method is used in some foreign countries. The sperm to fertilize the ovum is donated by a person other than the husband. Islamic Law does not allow this.

Assisted hatching:-

The embryologist opens a small hole in the outer membrane of the embryo, known as the zona pellucid. The opening improves the ability of the embryo to implant into the uterine lining. This improves the chances that the embryo will implant at, or attach to, the wall of the uterus. This may be used if IVF has not been effective, if there has been poor embryo growth rate, and if the woman is older. In some women, and especially with age, the membrane becomes harder. This can make it difficult for the embryo to implant.

COMPLICATIONS OF ASSISTED REPRODUCTION:

Some complications can result from infertility and its treatment. If conception does not occur after many months or years of trying, it can lead to stress and possibly depression.

Some physical effects may also result from treatment.

Ovarian hyperstimulation syndrome

The ovaries can swell, leak excess fluid into the body, and produce too many follicles, the small fluid sacs in which an egg develops.

Ovarian hyperstimulation syndrome (OHSS) usually results from taking medications to stimulate the ovaries, such as clomifene and gonadotrophins. It can also develop after IVF.

Symptoms include:

- bloating
- constipation
- dark urine
- diarrhoea
- nausea
- abdominal pain
- vomiting

They are usually mild and easy to treat.

Rarely, a blood clot may develop in an artery or vein, liver or kidney problems can arise, and respiratory distress may develop. In severe cases, OHSS can be fatal.

TWIN pregnancy

Assisted conception is associated with a high incidence of multiple pregnancy

Ectopic pregnancy

This is when a fertilized egg implants outside the womb, usually in a fallopian tube. If it stays in there, complications can develop, such as the rupture of the fallopian tube. This pregnancy has no chance of continuing.

Immediate surgery is needed and, sadly, the tube on that side will be lost. However, future pregnancy is possible with the other ovary and tube. Women receiving fertility treatment have a slightly higher risk of an ectopic pregnancy. An ultrasound scan can detect an ectopic pregnancy.

Coping mentally

It is impossible to know how long treatment will go on for and how successful it will be. Coping and persevering can be stressful. The emotional toll on both partners can affect their relationship. Some people find that joining a support group helps, as it offers the chance to talk to others in a similar situation. It is important to tell a doctor if excessive mental and emotional stress develop. They can often recommend a counsellor and others who can offer appropriate support emotional stress develop.

Fertility treatments for men

Treatment will depend on the underlying cause of the infertility.

- Erectile dysfunction or premature ejaculation: Medication, behavioral approaches, or both may help improve fertility.
- Varicocele: Surgically removing a varicose vein in the scrotum may help.
- Blockage of the ejaculatory duct: Sperm can be extracted directly from the testicles and injected into an egg in the laboratory.
- Retrograde ejaculation: Sperm can be taken directly from the bladder and injected into an egg in the laboratory.
- Surgery for epididymal blockage: A blocked epididymis can be surgically repaired. The epididymis is a coil-like structure in the testicles which helps store and transport sperm. If the epididymis is blocked, sperm may not be ejaculated properly.
- **Electric or vibratory stimulation to achieve ejaculation:**
- Ejaculation is achieved with electric or vibratory stimulation. This can help a man who cannot ejaculate normally, for example, because of a spinal cord injury.
- **Surgical sperm aspiration:**
- The sperm is removed from part of the male reproductive tract, such as the vas deferens, testicle, or epididymis.

SECTION THIRTEEN

MEDICINES

13.1 TERMS USING WHILE TALKING ABOUT MEDICINES

13.1 TERMS USING WHILE TALKING ABOUT MEDICINES

This module gives an opportunity to provide a framework for the therapeutic use of medicines in the treatment of diseases. The module describes how medicines work within the body, how they can be administered and how medicines should be stored.

BASIC PHARMACOLOGY

Pharmacology:

A broad term that includes the study of drugs and their actions in the body. The study of the effects of drugs.

Pharmacokinetics

The study of the relationship between the dose of drug administered and the serum or blood level achieved. It deals with drug absorption, distribution, metabolism and excretion

Pharmacy:

Pharmacy is the art of preparing, compounding and dispensing drugs for medical use. It also refers to the authorized shop where the medicines are dispensed from

Toxicology:

The science that deals with the poisons, their detection, symptoms, diagnosis and treatment of condition caused by them.

Medical Therapy:

It is the control of organisms in the human body. This term means the treatment of infections by means of substances (Drugs/Medicines) used in relatively minute concentration which:

- Kill or inhibit the growth of the infecting micro-organisms and
- Do not adversely affect the host.

Drug:

The word “Drug” is derived from the French word Drogue (a dry herb). A drug (or medicine) is defined as any substance used for the purpose of treatment, prevention and diagnosis of a disease in human beings or animals.

Indications:

Indications are conditions in which a drug can be given e.g., for diagnostic, therapeutic or preventive purpose.

absorption

process by which medications are taken into the body

Contraindications:

Contraindications are those conditions in which a drug cannot be used for any purpose or the reason against giving a particular drug

Side Effects:

These are the undesired and unwanted effects which a drug can produce inside the body along with its desired effects

Toxic Effects:

These are the dangerous or adverse effects of a drug or chemical which are produced inside a living body which may lead to death.

Allergic Reactions:

These are chemical reactions that result from previous sensitization to a particular chemical. It may be mild to severe.

Hypersensitivity:

This is an exaggerated allergic response of persons that cause reactions of a severe nature. It is also called abnormal reactivity to a chemical.

Adverse reaction

A response to a drug which is noxious and unintended, and which occurs at doses normally used in man for the prophylaxis, diagnosis, or therapy of disease, or for the modification of physiological function

Non-serious event Adverse event

which does not compromise functional activity, is usually mildly incapacitating, and is not associated with death, hospitalization, prolongation of hospitalization, permanent or severe disability, or otherwise is not life-threatening.

Bioavailability

The amount of unbound drug molecules able to cause a desired effect

bolus

The drug dose given rapidly IV. One-time rapid infusion

distribution

The process of transporting medication throughout the body

duration

The time between onset and disappearance of drug effects

emulsion

A mixture of water and oil bound with an emulsifier

enteral

pertaining to the GI tract, a medication administration category

excretion

process of elimination of drug molecules from the body

idiosyncratic effect

rare, unpredicatble adverse reaction to a drug

indication

reason or purpose for giving a medicine

local effect

limited to one place/part

metabolism

the breaking down of drug molecules by the liver

onset of action:

The time between administration of a drug and the first appearance of drug effects

parenteral

any medication administration route other than the alimentary canal

SOME MORE TERMS USED COMMONLY

Adverse Effect	Undesired, Potentially Harmful Side Effects Of Drugs
agonist	drug that binds to a receptor, stimulates the receptor's function
antagonist	drug that binds to a receptor and prevents a response
biotechnology	proteins produced from bacteria by altering DNA to make drugs
biotransformation	metabolism or breaking down of drug molecules in the liver

contraindication	A set of conditions in which the specific medicine must not be given, it is likely to cause significant harm
pharmacodynamics	study of drugs and their actions in living organisms
pharmacokinetics	the study of metabolism and action of drugs: absorption, distribution, metabolism, excretion
plasma protein binding	the ability of drugs to attach to receptor sites on plasma proteins
reconstituted	process of mixing a semisolid substance with liquid in preparation for administration
side effects	expected but unintended action/effect of a drug
solubility	ability of a medication form to be dissolved
solution	chemical substances dissolved in water
suspension	undissolved chemical substances dispersed in liquid
synergist	med that enhances the effect of another drug
topical	pertaining to being applied to a surface
systemic effect	response that affects the whole body

13.2 ROUTES OF ADMINISTRATION OF DRUGS

13.2 ROUTES OF ADMINISTRATION OF DRUGS:

A drug must be:

1) Able to inhibit the bacteria and other micro-organisms causing the infection
2) Nontoxic anywhere in the body
3) Effective even when it is diluted in the body fluids
4) Active in the presence of large amounts of organic matter
5) Not broken down chemically or excreted before it has time to act.

Of all these, toxicity is the greatest problem. Host cells and bacterial cells are much alike, and what kills one is very likely to kill the other. Even bacteriostatic substances may be injurious in some way to the rest of the human body. Until the 1930s, it appeared to be impossible to control bacteria deep in the tissues without serious damage to the host. Now such drugs have been discovered which cause a great deal of harm to micro-organisms but have relatively little effect on the rest of the body. They are however, not completely harmless substances. They supplement the natural defensive functions of the host in conquering infection. Finally, they are fairly specific in their action. Each is effective against certain types of organisms.

The spectrum of an antibiotic is the kinds of organisms susceptible to its action but even within these groups, special strains of bacteria may be resistant.

Some are effective chiefly against gram positive organisms while others against gram-negative. Several have a wide range of activity and these are called broad-spectrum antibiotics. It is important to note that, although viruses may be destroyed outside the body, yet only the largest virus particles are affected by any antibiotic drug known at present. It is not possible to destroy true viruses within the host cell without destroying the cell.

ROUTES OF ADMINISTRATION

The available routes for administering drugs into the body are:

1) Taken by mouth (orally)
2) Given by injection into a vein (intravenously, IV), into a muscle (intramuscularly, IM), into the space around the spinal cord (intrathecally), or beneath the skin (subcutaneously, sc)
3) Placed under the tongue (sublingually) or between the gums and cheek (buccally)
4) Inserted in the rectum (rectally) or vagina (vaginally)
5) Placed in the eye (by the ocular route) or the ear (by the otic route)
6) Sprayed into the nose and absorbed through the nasal membranes (nasally)
7) Breathed into the lungs, usually through the mouth (by inhalation) or mouth and nose (by nebulization)
8) Applied to the skin (cutaneously) for a local (topical) or bodywide (systemic) effect
9) Delivered through the skin by a patch (transdermally) for a systemic effect

ENTERAL ROUTES

Drugs are given by mouth, under the tongue or inserted in the rectum.
Oral
Sublingual
Buccal
Rectal

Oral Route:

This is the most commonly used route and often the one, which the patient expects.

Advantages:

It is the safest, easiest, convenient and the oldest route.

Convenient with clear instructions. (e.g., absorption of cloxacillin and tetracycline is decreased if taken with meals).

Disadvantages:

It cannot be used when the patient is non-cooperative.
Cannot be given to unconscious patient who does not have Naso gastric tube.
Cannot be given in case of vomiting.
Absorption may be slow or irregular especially after meal or drugs.
Some drugs cause irritation of stomach resulting in vomiting.
It cannot be used for drugs which are poorly absorbed (streptomycin, kanamycin).
Some drugs are destroyed in the gut (insulin, oxytocin).
Each drug when given orally is first absorbed by portal system and taken to the liver where most of the drug is metabolized before reaching the systemic circulation. this is known as 'first pass effect' Drugs are needed to be given in much larger quantity than the intravenous dose to achieve the desired therapeutic effect (e.g., propranolol)

Sublingual Route:

Drugs are placed in the mouth under the tongue or sublingually for systemic effect.

Advantages:

Oral mucosa has an abundant blood supply and the blood from here directly goes through the superior vena cava into the systemic circulation therefore a "quick" effect can be obtained (e.g., glyceryl trinitrate).

Disadvantages:

Irritation of mucous membrane can result in inflammation.

Excessive salivation promotes swallowing so losing the advantage of this route.

Buccal Route:

Rectal Route:

Rectum has a rich blood and lymphatic supply. Although rectal mucosa is not a naturally important absorbent site, yet some drugs can be given for both rectal and systemic diseases through this route.

Advantages:

Drugs irritant to the stomach can be given by this route (indomethacin).
This route is good in vomiting, motion sickness or when a patient cannot swallow.
Drugs are given for local action (suppositories).

Disadvantages:

Repeated use of the route may cause;
Rectal inflammation.
Absorption can be irritable, if the rectum is full.

PARENTERAL ROUTES

Drugs are injected in muscles, veins, arteries or under the skin.
Intramuscular
Intravenous
Intra-arterial
Sub-cutaneous

Intramuscular Injection:

The different sites used for giving intramuscular injections are
Gluteal muscle (Dorso and Ventrogluteal muscle)
Deltoid muscle
Quadriceps muscle(Rectus femoris, Vastus Lateralis)

Absorption from these sites is rapid and uniform with aqueous solutions; but delayed with oily suspensions and thus the effect is prolonged, e.g. progesterone.

The rate of absorption depends upon the concentration, solubility of drug and muscle blood flow. It may be increased by heating and massaging the area and decreased by cooling it.

Advantages:

Absorption of drug takes less time (1-2 minutes) as compared to the oral route.
Drugs irritant to G.I.T. can be given through this route (penicillin).
Drugs with bad taste can be given through this route.

Disadvantages:

Painful route of administration
Infections can occur at the site of injection.
Drugs once injected cannot be removed from the body.
Sometimes highly irritant drugs can cause necrosis of the muscle.
If there is a vessel underlying the site of injection, it can be punctured and the drug passing into it can cause serious effects.

Injury to a nerve can cause paralysis of that muscles.

Intravenous injection:

This injection is given into the lumen of a vein for quick action.

Advantages:

This route provides most rapid and reliable response after administration; therefore, it is used for emergency treatment.
This route can be used in comatose patients.
Drugs that are rapidly destroyed in G.I.T. can be infused continuously (e.g., oxytocin).
This is the only route for blood transfusion.
Drugs that are not absorbed from the gut or that are too irritant can be given through this route.
If a small amount of injection produces a serious side effect, then further administration can immediately be ceased.

Disadvantages:

Intravenous injection needs more skill than intramuscular injection.
Unfavorable reactions occur more commonly.
Once a drug is injected it cannot be retrieved.

Precautions

Venipuncture may cause thrombosis.
Certain drugs should not be given intravenously at all since they can cause ventricular fibrillation and death.
All intravenous injections should be given slowly so that they are diluted in blood.

Intra-arterial injection:

The injection is given into the lumen of an artery.

Advantages:

In a very short time, the drug goes to its site of action.
Its potency is not decreased by tissue enzymes.
This method is used in special forms of therapy, e.g., a very small dose of a drug is needed in the chemotherapy of malignant disease.
To visualize tissue (heart, kidney) radiologically the dyes are injected in an artery.

Disadvantages:

Painful route.
Thrombosis is more serious in an artery than in a vein.
It requires great care and expertise.

Sub-cutaneous injection:

The injection is given in sub-cutaneous tissues by raising the skin.

Advantages

Used for giving vaccine and hormones.

Larger volumes of drug can be given especially in the subcutaneous tissue of the anterior abdominal wall.
It can be used for giving test dose of drug.

Disadvantages:

Painful route.
Irritant drugs cause local necrosis.
Absorption is a bit slower than intramuscular route.

INHALATION

Drugs may be inhaled in form of gases, aerosols and powder.
Aerosols are suspensions of fine solid or liquid particles in air or gas. Drugs usually given through this route are:
Bronchodilators
Steroids
General anesthetics (like ether, chloroform)

Advantages:

Larger surface area is available for the absorption of drugs.
There is quick onset of action because the drug quickly enters the blood stream.

Disadvantages:

Drugs are sometimes irritant to pulmonary epithelium and cause bronchospasm or excessive formation of bronchial secretion, this can precipitate the infection of lungs.

TOPICAL

The drug is applied locally to the skin or over the mucous membrane like the conjunctiva, nose, urethra or vagina. This route is usually utilized when local action is required.

Application to Skin: It is generally used for local effects. The steroids, antibiotics, antiseptics analgesics, contraceptives etc. may be applied to skin as solutions, powders, creams, dermal patches etc.

Application to Mucous Membrane:

Drugs are applied to the mucous membranes of the conjunctiva, nose, vagina and urethra primarily for their local effects.

Example: Anti Diuretic Hormone (ADH) in diabetes insipidus is rubbed on the nasal mucosa and it gets absorbed for the systemic effects.

MISCELLANEOUS

Intraperitoneal injection: The drug is injected in the peritoneal cavity of the abdomen. It is used for removal of waste products e.g., Peritoneal dialysis is often a valuable procedure.

Advantage:

The peritoneal cavity offers a large absorbing surface from which drugs enter the circulation rapidly.

Disadvantage:

Due to the danger of infection, it cannot be used in routine.

Intrathecal injection: Drugs are directly injected in the spinal subarachnoid space between L_2 and L3 vertebrae e.g., in treating meningitis and in spinal anesthesia after diluting with Cerebro-Spinal Fluid (CSF), the drugs are injected through this route so that the sensations of the lower part of body are lost.

Advantages:

Drugs which poorly cross the Blood Brain Barrier (BBB) are injected through this route to provide high local concentration of drug.

For diagnostic purpose, CSF is sometimes removed through this route.

Disadvantage:

Risk of CSF fluid leakage and subsequent infection of central nervous system

Intra-articular injections:

This route provides high local concentration of antibiotics or steroids within an inflamed joint e.g., Gold Therapy in Rheumatoid Arthritis

Intradermal injection:

In this the drug is injected in dermis for example testing allergic or hypersensitivity reactions e.g. penicillin allergy can be tested by diluting it 10,000 times and the reaction is seen in 10-15 min. If redness appears and the site of injection is raised, then it means that the person is hypersensitive to the drug. In delayed type of hypersensitivity, the reaction appears after 48-72 hours. For example, tuberculosis hypersensitivity reaction, which can be tested in clinical practice, and this is diagnostic for primary TB

13.3 ABSORPTION OF DRUGS

13.3 ABSORPTION OF DRUGS

Absorption is the transfer of a drug from its site of administration to the blood stream. The rate of efficiency of absorption depends on the route of administration. For intravenous administration absorption is complete, that is total dose of drug reaches the systemic circulation. Drug administration by other routes may result in partial absorption. For example, oral administration in which a drug dissolves in the gastrointestinal fluid and then penetrates the epithelial cells of the intestinal mucosa. It also depends on the solubility and other physical properties of the drug.

Transport of Drug from G.I. Tract:

Drugs may be absorbed from the G.I.T. by either passive or active transport.

Passive Diffusion:

The driving force for passive absorption of a drug is the concentration gradient across a membrane separating two body components i.e., the drug moves from a region of high concentration to a region of low concentration. Passive diffusion does not involve a carrier, is not saturable and shows a low structural specificity. Most drugs gain access to the body by this mechanism. Lipid soluble drugs readily move across most biological membranes, whereas water soluble drugs penetrate the cell membrane through aqueous channels.

Active Transport:

Active transport is energy dependent that involves a specific carrier protein and is driven by the hydrolysis of ATP. It is capable of moving drugs against a concentration gradient i.e., from a region of lower concentration to a region of higher concentration. A few drugs that closely resemble the structure of a naturally occurring metabolite are actively transported across cell membranes using these specific carrier proteins.

From Mouth:

This occur by diffusion and although the surface area for absorption is small, absorption occurs rapidly because buccal mucosa has rich blood supply. This route is useful for the drugs such as glyceryl trinitrate when a rapid effect is desired or steroids (and also glyceryl trinitrate) which can be destroyed in G.I.T. before absorption or in portal circulation immediately after absorption from stomach or intestine.

From Stomach:

Weak acids such as salicylates and barbiturates are largely non- metabolized in the acidic gastric content and are, therefore, well absorbed from the stomach. Weak bases such as quinine are highly ionized and are not significantly absorbed from the stomach.

From Rectum:

This is very similar to intestinal absorption. The surface for absorption is not especially large, but the blood supply is efficient, and absorption can be quite rapid e.g. of drugs commonly administered rectally include Voltarel Suppositories, Calpol suppositories and aminophylline.

Various medicines are administered rectally for their local effects. This route of administration also overcomes some of the problems caused by “first pass effects “and the decomposition of orally administered drugs by metabolism before they reach the general circulation.h

FACTORS AFFECTING RATE OF G.I.T ABSORPTION

Absorptive surface area of G.I.T:

In intestine there is increased absorption because of large surface area. Metoclopramide increases gastric emptying and also increases rate of absorption of drug. Atropine causes decrease GI motility and tone , therefore, decreases rate of absorption.

Motility of G.I.T:

Increased motility increases absorption. Decreased motility decreases absorption, and the drug will remain in the stomach. In hyper-motility the drug passes through the intestines so rapidly that it has no time for absorption and is excreted in the stools as such.

Rate of splenic blood flow:

Increased blood flow / rapid circulation increases amount of drug absorbed, because transport of drugs by plasma proteins is the major mechanism by which drugs are carried away from the site of absorption.

pH of G.I.T:

Weak acids (e.g., barbiturates) are best absorbed in the area of low pH as stomach. Weak bases (e.g. quinine) are best absorbed in the area of high pH as intestine.

Presence of other substances:

It can affect absorption of drugs by influencing gastric pH, G.I.T motility or by forming unabsorbable complexes with drugs e.g., tetracycline when given with food decreases tetracycline absorption because it is diluted by food.

Diseased state:

In congestive heart failure there is edema of G.I.T, hence absorption is decreased. In pyloric stenosis there is delayed gastric emptying and so there is decreased absorption.

MECHANISM OF DRUG ACTION

Some older drugs such as quinine (for malaria) and arsenic (for syphilis) acted by killing the parasites. Nearly all modern drugs are bacteriostatic i.e., they inhibit growth and multiplication of infecting micro-organisms. These do not immediately kill the infecting organisms, but they are effective because inhibition of the micro-organisms permits phagocytes to overpower them. These drugs are metabolite antagonists i.e., they depend on the fact that a key enzyme in the parasite, instead of combining with its normal substrate, combines (instead) with the drug.

Maintenance of Blood Levels:

Since many drugs tend to be eliminated from the blood and tissues rather rapidly, the amounts in the blood (blood levels) tend to fall to levels at which the resistant individuals among the infecting bacteria can grow, unless the dose is repeated at proper intervals. If delayed, the patient soon has to combat a drug-fast infection. Therefore, it is of the great importance that a nurse responsible for giving repeated doses of such drugs sees that the patient receives the drug on time, so that the blood levels may not fall to dangerously low levels.

EXCRETION OF DRUGS

Kidney:

It is the most important excretory organ for drugs into the urine. If renal function is impaired as in old age or renal disease, then there is a decrease in the elimination rate of drugs. These drugs are liable to accumulate in the body and produce toxic effects in patients with impaired renal function. In these patients, doses of such drugs must be appropriately reduced.

Bile:

Some drugs metabolized in the liver are excreted through bile.

Intestines:

Drugs which act mainly on the large bowel are partly excreted from the intestines. Heavy metals like iron excreted through the large intestine gives black color to the stools.

Lungs:

Certain drugs are partially excreted by the lungs and impart their odour to breath.

Skin:

Some drugs are excreted through the skin

Saliva:

Metallic salts are excreted in the saliva. Lead compounds produce blue line on the gums.

Breast Milk:

Nearly all drugs taken by the mother are likely to be found in breast milk. If the following drugs are given to mother in sufficient amount, they can adversely affect the infant who is on breast feed such as: Penicillin (allergy), Ampicillin (diarrhoea), Metronidazole, Anti thyroid drugs, Anti-cancer drugs, high dose corticosteroids and others

13.4 SIDE EFFECTS OF DRUGS

13.4 SIDE EFFECTS OF DRUGS

The drug introduced into the body affects the host tissues, the invading micro-organisms and frequently also the micro-organisms that are normally present in the host, known as commensals. Because both the host and the micro-organisms are living things, their reactions may be multiple and varied. These biologic reactions are the basis of many of the difficult problems of medical therapy.

Toxicity for Host Tissues:

It is unlikely that any drug is entirely lacking in toxicity if it is given in sufficiently high concentrations. However, some drugs including penicillin are so relatively nontoxic that they can be safely given in quantities much greater than the minimum needed for effective treatment. Unfortunately, certain other useful drugs are toxic in concentrations only very slightly higher than the effective dosage. Sulfa drugs may cause kidney damage, especially with an acid urine; streptomycin therapy sometimes results in vertigo and deafness due to injury to the eighth cranial nerve; the tetracycline may produce disturbances in the alimentary tract; and so on. Any individual under treatment with a chemotherapeutic agent of any kind should be kept under close medical observations.

Hypersensitivity:

Persons who have been previously treated with an antibiotic may show signs of tissue injury if they are given the drug again. They are then said to be allergic or hypersensitive to the drug. It differs from toxicity in that the injury to the body is not caused directly by the drug, but indirectly, as a result of the body's reaction to the drug. The severity of the reaction is not related to the size of the dose, as in direct toxic damage; it does not occur the first time the drug is given. It develops usually in certain individuals who are constitutionally predisposed to allergies. Moreover, the symptoms are varied and appear in a variety of tissues, while the effects of the toxicity of a drug are the same in all persons.

Development of Resistant Strain:

A species of micro-organism that is sensitive to a drug may give rise to mutants that are resistant to the drug's action A subsequent exposure of this mixed population to the same drug may result in the suppression of the sensitive cells, while the resistant ones continue to multiply. Resistance to some drugs, such as streptomycin, develops rapidly, while in other cases relatively few resistant strains have appeared. This is to be expected since each drug acts differently on the bacterial cell and the mechanism of heredity of the affected process (e.g., the number of genes involved) may differ also. Sometimes it is possible to suppress resistant organisms by using a higher concentration of the drug or using it for a longer time. In other cases, the resistant strains are unaffected even by massive doses of the antibiotic e.g., MARSA

Alteration of the Body's Normal Flora:

A great variety of microorganisms live normally on the skin and many on the mucous membranes. Competition for food and other factors keep these organisms in a kind of balance, so that no one type develops excessively. When an antibiotic is introduced, the drug-

sensitive organisms are inhibited or destroyed, and this balance is upset. As a result, the surviving drug-resistant species multiply unchecked, and while the small number originally present were harmless to the host, the relatively enormous quantity now produced may cause infection. In other words, the drug is given for the purpose of treating an infection caused by one organism; it may be successful in this. At the same time, however, it may destroy other organisms normally present in the body, thus allowing still others to multiply in abnormally large numbers, so that the patient, having been cured of one infection, now develops a second, quite different disease. These post antibiotic infections may take a variety of forms, such as diarrhoea, membranous colitis, pharyngitis, pyelitis, cystitis, septicemia or even meningitis. The micro- organisms most often identified in these cases are pyogenic staphylococci, the yeast Candida albicans and some of the gram-negative rods.

TOXIC & ALLERGIC EFFECTS OF DRUGS

It is known that drugs generally are much more toxic for the parasite than for the host. Thus, they help to destroy the parasites in minute dosages that have insignificant or at least not fatal effects on the host. It is to be borne in mind that excessive doses of antibiotics or administration by improper routes, in some instances can produce severe reactions which may cause death.

Some antibiotics are allergens and patients may have severe allergic responses to them. Penicillin is notable in this respect. Service provider should always inquire about drug allergy before giving antibiotics.

CONSEQUENCES OF MULTIPLE DRUG THERAPY

If many drugs are prescribed for simultaneous use it may cause a number of reactions, for which vigilance is required.

- Allergic reactions.
- Reduction in efficacy of drugs.
- Drug interaction can occur.
- Some drugs need to be given on full stomach.
- In case of any allergic reaction, it will be difficult to pin point one drug.
- Absorption of drugs can be affected when given together.

13.5 FORMS OF MEDICINES

13.5 FORMS OF MEDICINES

Medicines exist in many forms and each form has its different varieties.

Solids

- Powders
- Pills
- Tablets
- Capsules
- Pessaries

Oils / Emulsions

- Ointments
- Creams
- Suppositories

Liquids

- Tincture
- Suspension
- Solution
- Infusion
- Syrup
- Injection

TYPES OF DRUGS

Drugs effective against bacteria are generally divided into two groups:

1) Synthetic drugs (like sulfonamides) are those produced in the laboratory by chemical alteration of known organic substances (such as dyes).
2) Natural drugs (like antibiotics) are those obtained as natural products directly from higher fungi or bacteria.

There are many types of drugs in the market. Today the most widely used are: the sulfonamides (synthetic) and the antibiotics (natural-mostly from living organisms).

SYNTHETIC GROUP

Sulfonamides:

These synthetic drugs were discovered in 1935 by Domagk, a German chemist, who investigated the poisonous action of a certain aniline (coal tar) dye, Prontosil. This substance, in staining bacteria, eventually killed them after inducing bacteriostasis. Sulfanilamide (from

which virtually all sulfonamide drugs are derived) was found to be the active part of Prontosil. Although not a dye, sulfanilamide is derived from coal tar, like many dyes.

The group of “sulfa drugs,” as they are often called, includes sulfathiazole, sulfadiazine, sulfamerazine and many others. One of their chief drawbacks at first was their toxic side effects, but forms are now available that avoid these difficulties to a large extent.

NATURAL GROUP

Antibiotics:

The name antibiotic means “against life.” Since antibiotics are most widely used to combat micro-organisms, it might be more accurate to call them “antimicrobiotics.” The principal action of some antibiotics is bactericidal (killing germs) and others are bacteriostatic. they stop the growth of pathogenic micro-organisms and therefore their multiplication in the infected animals; so that phagocytes and other defensive mechanisms including antibodies, can dispose of pathogens.

Two important properties of micro-organisms in relation to antibiotics are:

1) Their usual response to antibiotic therapy
2) The probability that they will become drug-fast or antibiotic resistant.

Use of Antibiotics:

Some antibiotics may be given by mouth only; some are used in ointments only; others are suitable for intravenous or intramuscular injection; and some are suitable for any route of administration. The action of the antibiotics varies greatly.

Bactericidal antibiotics include:

1) Penicillin
2) Streptomycin
3) Bacitracin
4) Polymyxin B

Bacteriostatic antibiotics include:

1) Tetracyclines
2) Chloramphenicol
3) Erythromycin
4) Neomycin

Antibiotics of the second group are generally of the “broad-spectrum” type and new ones appear in the market frequently. Some antibiotics are described below:

Penicillin –

The first clinically effective antibiotic was discovered by Sir Alexander Fleming in 1922. Penicillin is very effective against infections with most gram-positive organisms. It is also very effective against the gram-negative gonococcus and certain spirochetes, especially those causing syphilis and the related tropical diseases called yaws and bejel.

It is important for the health care provider to know that some penicillin solutions, as well as the dry powder, are relatively unstable and rapidly deteriorate on exposure to air, sunlight and warmth. For this reason, penicillin preparations should not be dissolved or opened until needed and should be kept in the refrigerator in the dark unless the penicillin being used is specifically stated to be of a stable type.

Streptomycin and dihydrostreptomycin (a derivative) –

Are among the most valuable antibiotics since they are effective against human strains of tubercle bacilli. The drugs are used as an adjunct to bed rest and other medical and surgical therapy in the treatment of tuberculosis. Streptomycin is also effective against several species of gram-negative bacteria that are unaffected by penicillin: Brucella (cause of undulant fever), Shigella (dysentery bacilli) and others. It also controls some gram-positive species.

Chloramphenicol (Chloromycetin)-

Discovered by Paul R. Burkholder is effective against a large number of bacterial infections, both gram-positive and gram-negative. It has been found of value in typhoid and paratyphoid infection. It is also of considerable value in the treatment of some rickettsia and a few large-viral diseases. There is evidence that it sometimes adversely affects the blood-forming organs. Its use should, therefore, be carefully followed by appropriate daily examinations of the blood.

Tetracycline Group –

Antibiotics called Achromycin, Terramycin and Aureomycin are chemically related. All belong to the tetracycline group of compounds. They are effective against many gram-negative and gram-positive species of bacteria, some large viruses and some rickettsiae. They are typical of the broad-spectrum antibiotics and have similar ranges of therapeutic activity.

Nystatin or Fungicidin (Mycostatin) –

Is of particular interest because it is one of the very few therapeutically useful antibiotics that are effective against pathogenic fungi. It is often combined with broad-spectrum antibiotics.

Cycloheximide (Actidione) –

Is another antifungal antibiotic.

13.6 DRUG FORMULARY CATEGORIES OF MEDICINES

13.6 DRUG FORMULARY CATEGORIES OF MEDICINES

Essential drugs for managing complications in pregnancy and childbirth	
ANTIBIOTICS	
Amoxicillin	ANTIHYPERTENSIVES
Ampicillin	Hydralazine
Benzathine penicillin	Labetolol
Benzyl penicillin	Nifedipine
Cefazolin	
Ceftriaxone	OXYTOCICS
Cloxacillin	15-methyl prostaglandin F2α
Erythromycin	Ergometrine
Gentamicin	Methylergometrine
Kanamycin	Misoprostol
Metronidazole	Oxytocin
Nitrofurantoin	Prostaglandin E2
Penicillin G	
Procaine penicillin G	ANAESTHETICS
Trimethoprim/Sulfamethoxazole	Halothane
STEROIDS	Ketamine
Betamethasone	Lignocaine 2% or 1%
Dexamethasone	
Hydrocortisone	ANALGESICS
	Indomethacin
DRUGS USED IN EMERGENCIES	Morphine
Adrenaline	Paracetamol
Aminophylline	Pethidine

Atropine sulfate	
Calcium gluconate	SEDATIVES
Digoxin	Diazepam
Diphenhydramine	Phenobarbitone
Ephedrine	
Frusemide	ANTIMALARIAL
Naloxone	Artemether
Nitroglycerine	Artesunate
Prednisone	Chloroquine
Prednisolone	Clindamycin
Promethazine	Mefloquine
	Quinidine
IV FLUIDS	Quinine dihydrochloride
Dextrose 10%	Quinine sulfate
Glucose (5%, 10%, 50%)	
Normal saline	Sulfadoxine/Pyrimethamines
Ringer's lactate	
	TOCOLYTICS
ANTICONVULSANTS	Indomethacin
Diazepam	Nifedipine
Magnesium sulfate	Ritodrine
Phenytoin	Salbutamol
OTHER	Terbutaline
Anti-tetanus serum	
Ferrous fumerate	
Ferrous sulfate	

Folic acid Heparin Magnesium trisilicate Sodium citrate Tetanus antitoxin Tetanus toxoid Vitamin K	

ANALGESICS / ANTIPYRETICS

Analgesic alleviate pain by causing insensibility to pain Antipyretic lowers the raised body temperature in febrile condition

1	Acetaminophen	
	(Paracetamol/Panadol) Acetyl Salicylic Acid Mefenamic Acid	(Disprin) (Ponstan)
2.	ANTI RHEUMATIC	
Relieves pain & inflammation and lower the raised body temperature		
	Ibuprofen	(Brufen)
3.	ANTIBIOTICS / ANTIBACTERIALS	
Kills or stops growth and multiplication of micro-organisms in the human body		
	Cotrimoxazole	(Septran)
	Ampicillin	(OmniPen)
	Oxytetracycline	(Tetracycline)
	Doxycycline	(Vibramycin)
	Nalidixic Acid	(NegGram)
	Erythromycin	(Erythrocin)

4.	ANTI-ALLERGICS	
Counter the allergic reaction and reduce symptoms such as itching, oedema & inflammation		
	Chlorpheniramine maleate	(Piriton)
	Promethazine	HCl (Phenergan)
5	ANTIMALARIALS	
Kills the malarial parasites in the blood		
	Chloroquine	Sulphate/Phosphate (Chloroquine/ Resochin)
	Amodiaquine (Basoquin)	
6	ANTIPARASITICS (AMOEBICIDALS)	
Eradicates Trichomonas and Entamoeba Histolitica in the body		
	Tinidazole	(Fasigyn)
	Metronidazole	(Flagyl)
7	ANTIDIARRHOEALS	
Act locally in Intestinal tract infections		
	Attapulgite	(Neo Intestopan)
	Kaolin+Pectin	(Kaopectate)
8	ANTACIDS	
Relieve heart burn by neutralizing the acid		

	Magnesium Trisilicate	(Trisil/Gelusil)
	Magnesium Hydroxide	(Mlik of magnesia)
	Simethicone	(Infacol)
	Aluminium Hydroxide	(Almagel)
	Simethicone+Aluminium Hydroxide+Magnesium	Hydroxide (Simeco)
9	ANTIEMETICS	
Effective against nausea, vomiting and slow the peristaltic movements of the intestines		
	Meclizine + B6	(Navidoxine)
	Promethazine Theoclate	(Avomine)
	Promethazine	(Phenergan)
	Metoclopramide HCl	(Maxolon)
	Dimenhydrinate	(Dramamine/Gravinate)
10.	ANTISPASMODICS	
Relieve the spasm of the smooth muscles in the organs and thus eliminate the pain		
	Hyoscine compound	(Buscopan)
11.	ANTIHELMINTICS	
Eradicate intestinal worms		
	Pyrantel Pamoate	(Combantrin)
	Mebendazole (Vermox)	

	Levamisole (Ketress)	
12	LAXATIVES	
Increase peristaltic movements of Intestines and thus relieve constipation		
	Lactulose	(Duphalac)
	Bisacodyl	(Dulcolax)
13	SEDATIVES/TRANQUILLIZERS	
Sedate the brain & nerve reflexes		
	Diazepam	(Valium)
	Bromazepam	(Lexilium/Lexotanil)
14	ANTITUSSIVES/EXPECTORANTS	
	Depress the cough reflex, cause bronchodilatation and relieve cough	
	Triprolidine HCl + Pseudo ephedrine HCl +	(Actifed-DM)
	Dextromethorphan HBr	Pholcodine
	Ammonium Chloride	(Pulmonol)
15	VITAMIN/MINERAL SUPPLEMENTS	
Make up for the vitamin and mineral deficiency in the body		
	Vitamin A and D	Seven Seas)
	Vitamin B complex	
	Vitamin C/ Ascorbic acid	(Ascorbon)
	Calcium Lactate/Carbonate	
	Ferrous Fumarate/Ferrous Sulphate	

	Folic Acid	
16	EYE PREPARATIONS	
Relieve infection and inflammation of the eyes by their local action		
	Sulphacetamide	
	Chloramphenicol	
	Polymixin B sulphate	(Polyfax)
17	EAR PREPARATIONS	
Relieve infection and inflammation of the ears by their local action		
	Polymixin B sulphate+ Lignocain	(Lidosporin
	Polymixin B sulphate+Neomycin Sulphate+steroid	(Otosporin)
18	ORAL PREPARATIONS	
Harmless when applied on the buccal mucosa and relieve the symptoms in the mouth		
	Nystatin	(Nilstat)
19	LOCAL SKIN PREPARATIONS	
Relieve infection and inflammation of the skin by their local action. Effective locally on skin lesion		
	Polymixin B sulphate + Bactricin Permethrin 5%	(Polyfax)(Lotrix)(Scabion)
	Crotamiton + sulp hur Lindane	
20	DRUGS FOR REPRODUCTIVE SYSTEM	
Have specific action on the reproductive organs		

	Clotrimazole	(Gynosporin)
	Nystatin	Nilstat
	Methyl Ergometrine	(Methergine)
	Sulphonamide	(Sulpha kream N)
21	DRUGS FOR URINARY INFECTION	
Have specific action on the urinary tract		
	Pipemidic acid	(Urixin)
	Sodium acid citrate	(Sioalkalie/Citralka)
22	HEMOSTATICS	
Prevent the breakdown of blood clots and control severe bleeding		
	Tranexamic acid	(Transamine/ Traxyl)
23	LOCAL ANTISEPTICS/ DISINFECTANTS	
Antiseptic is any substance which prevents or inhibits the growth of bacteria; it does not necessary kill them. Disinfectant is a substance which kills bacteria, but it may also damage human tissue		
	Methylated spirit	Povidone Iodine (Pyodine)
	Parachlorometazylenol	(Dettol)
	Tincture Iodine	
24	REAGENTS	
Acetic acid Benedict’s Solution		

ANALGESICS / ANTIPYRETICS

	ACETAMINOPHEN (Paracetamol/ Panadol)	**ACETYL SALICYLIC ACID (Disprin)**	**MEFENAMIC ACID (Ponstan)**	**IBUPROFEN (Brufen)**
Form	Tablets: 500 mg Syrup: 120 mg/5 ml	Tablets: 300 mg	Tablets: 250 mg 500 mg (Forte) Syrup:50mg/5 ml	Tablets: 200 mg 400 mg 600 mg Syp: 100 mg/ml Gel (for local use)
Indication	To lower temperature,	To lower	To lower	Muscular pain,
	To relieve pain,	temperature,	temperature, Backache,	Rheumatic pain,
	Dysmenorrhoea,	To relieve pain,	Dysmenorrhoea,	Dental pain,
Headache.		Dysmenorrhoea,	Heavy menses,	Migraine, Fever.
		Headache,	Dental pain.	
		Muscular pain.		
Contraindication	Prolonged use and	Hypersensitivity to	Active peptic ulcer,	Peptic ulcer, GI
	over dosage cause	aspirin group,	GI bleeding,	bleeding,
	liver damage and	Peptic ulcer.	Pregnancy,	Pregnancy,

	convulsions in		Hypersensitivity	Hypersensitivity
	children.			
Dose				
	Adult: 1-2 tablets three times a day (can be repeated every 4 hours; max. 8 tablets) Children:	1-2 tablets three time a day or as and when required 1 tsp (5ml) three times a day or as directed by doctor	1-2 tablets three times a day Forte tab: 1 tab TDS 9-12 yrs:4 tsp 8hrly 5-8 yrs:3 tsp 8hrly 2-4 yrs:2 tsp 8hrly 6months-1yr:1tsp 8hrly	200-400 mg 8 hourly 600 mg 1 tab/day 8- 12 yrs: 2 tsp TDS 3-7 yrs: 1 tsp TDS Gel: Apply locally
Side effect	Allergy,	Skin rash, Nausea,	Allergic reaction,	Nausea, Vomiting, Epigastric discomfort, Dizziness, Headache,Skin rash.
	Gastro-intestinal upset.	Dyspepsia, Giddiness,	Drowsiness, Diarrhoea,	
		Tachycardia,	Rashes, Convulsion	
		GI bleeding.		

Warning	Long term use can lead to chronic renal disease In children with fever over 102°F, cold sponging should be done first	GI bleeding can be minimized by taking dose after food. Frequent/excessive use should be avoided. Antacids reduce rate of absorption of Aspirin.	It should be given with caution in patients with high blood pressure and asthma.

ANTIBIOTICS / ANTIBACTERIALS

	CO-TRIMOXAZOLE (Septran)	**AMPICILLIN (Omni Pen)**	**OXYTETRACYCLINE(Tetracycline)**	**DOXYCYCLINE(Vibramycin)**
Form	Trimethoprim + Sulphamethoxazole DS Tab: 160 mg + 800 mg	Cap: 250 mg 500 mg Dry granules	Cap: 250 mg	Tab/Cap: 100 mg
	Tablet: 80 mg+400 mg	125 mg/5 ml		
	DS Syp:80 mg + 400 mg/5 ml	250 mg/5 ml		
	Paeditric suspension:			

	40 mg+200 mg/5 ml			
Indication	All types of Infections	Infections of Respiratory tract, Soft tissue infections, Typhoid fever, Pelvic inflammatory disease, UTI.	Skin infection, Pelvic infection,	Pneumonia, Respiratoryb tract infection, GI infection, Soft tissue & ophthalmic infections, UTI.
	Respiratory tract infection,		Eye infection, Respiratory infection,	
	Urinary tract infection,		Urinary infection.	
	Nonspecific vaginitis,			
	Bacterial diarrhoea,			

	CO-TRIMOXAZOLE (Septran)	**AMPICILLIN (Omnipen)**	**OXYTETRACYCLINE (Tetracycline)**	**DOXYCYCLINE (Vibramycin)**
	Bacterial dysentery, Enteric fever.			
Contraindication	Pregnancy, Breast feeding,	Previous sensitivity to penicillin.	Pregnancy, Breast feeding,	Pregnancy, Lactation.
	Infant under 6 weeks, Sensitivity to sulpha group.		Previous sensitivity to drug, Children under 12 years.	
Dose	Adult:			

	DS tab:1 tablet twice a day for 5 - 7 days Tab:2 tablets twice a day for 5 – 7 days	1 cap every six hour for 5 - 7 days	1 cap every six hours for 5 - 7 days	200 mg or 100 mg BD with food or fluid on the 1st day then 100 mg daily for 7 days.
	Children: 1-5 months:1/2 tsp twice a day for 5 – 7 days	1 tsp 6 hourly for 5-7 days		Above 8 yrs: 4 mg/kg with food or fluid on 1st day then 2 mg/kg daily.
	6 months- 5 years: 1 tsp twice a day for 5 – 7 days			
Side effect	Nausea, Vomiting, Diarrhoea, Skin rash, Urticaria, Nerve deafness, Glossitis.	Allergic, urticaria, Nausea, Epigastric disorders, Skin rash, Drug fever,	Nausea, Epigastric distress, Tooth discoloration, Skin rash.	Tooth discoloration, Enamel hypoplasia, Reduced fibula,growth rate, Nausea,
		Oral candidiasis		Vomiting, Stomach disturbance.

Warning	Stop treatment if rashes develop	Efficacy of oral contraceptives reduced with ampicillin. May cause break through bleeding	Use with caution in old age. Not recommended in Children. Pregnant women should not take it due to its genetic effects.	Avoid use in children under 8 years, Pregnancy & lactation.

	NALIDIXIC ACID **(Negram)**	**ERYTHROMYCIN** **(Erythocin)**
Form	Tablet: 500 mg Suspension: 250 mg/5 ml	Tablet: 250 mg and 500 mg Granules: 200 mg/5 ml Drops: 100 mg/2.5 ml
Indication	Urinary tract infection, Intestinal infection due to gram negative organisms.	Respiratory tract infection, Urethritis, Diphtheria, whooping cough, Burns & wound infection.
Contraindication	Known hypersensitivity, Pregnancy/ lactation, Epilepsy.	Hypersensitivity, Liver disease.
Dose	Adult: Initially 2 tablets 4 times a day then	250 mg: 3-4 times a day for 5-7 days
	1 tab for 7-14 days Children: 3 months -12 years: Up to 50 mg/kg daily in	500 mg BD for 5-7 days 30-50 mg/kg/day in divided doses (preferably 6 hourly) for 5-7 days 6-12 yrs: 300 mg QID 1-6 yrs: 200 mg QID 4months-1yr: 100 mg QID

	divided doses.	
Side effect	False +ve urine glucose, Weakness Convulsions, Nausea, Epigastric disorders.	Nausea, Epigastric pain, Diarrhoea, Skin rash.
Warning	Do not use in children under 3 months	Use with caution in patients with liver and kidney disease

ANTIALLERGICS

	CHLORPHENIRAMINE MALEATE **(Piriton)**	**PROMETHAZINE HCl** **(Phenergan)**
Form	Tablet: 4 mg Syrup: 2 mg/5ml	Tablet: 25 mg Syrup: 5 mg/5ml
Indication	All allergies, Rashes, Insect bites.	Nausea, Vomiting, Allergy, Urticaria.
Contraindication	Over dosage causes liver damage.	Urinary retention.
Dose	***Adult***: 1-2 tabs. 3 times a day ***Children***: 1 tsp (5ml) 3 times a day	One tab twice daily 6-12 months: ½ tsp 1-2 times a day 1-5 years: 1 tsp 2 times a day 5-12 years: 1 tbsp 2 times a day
Side Effects	Drowsiness, Impaired reaction, Dizziness.	Headache, Drowsiness, Hypotension, Dryness of mouth, Sedation, Blurred vision.

Warning	Lactating mothers should stop breast feeding during use of this medicine.	Do not drive after use. Do not use in pregnancy and lactation.

ANTIMALARIALS

	CHLOROQUINE SULPHATE/ PHOSPHATE (Chloroquine/ Resochin)	**AMODIAQUINE (Basoquin)**
Form	Tablet: 250 mg (150 mg base) Syrup: 50 mg in 5ml (50mg base)	Tablet: 250 mg (150 mg base) Suspension: 150 mg/5ml
Indications	Malaria, Prophylaxis of Malaria	Malaria
Contraindications	Eye dysfunctions, G.I. Disease, Liver Disease.	Hypersensitivity, Pregnancy, Breast Feeding.
Dose	***Adult***: Total dosage: 10 tabs in 3 days. (4 tabs stat, 2 tabs after 6 hours,1 tab twice a day for 2 days) ***Children***: <u>5 years and above</u>: 2 tabs stat, 1 tab 8 hourly for 3 days <u>Under 5 years</u>: 2 tabs stat, 1 tab. after 6 hrs,1 tab twice a day for 2 days Syrup: 1 mg/kg body wt. in divided doses **<u>Prophylactic dose</u>:** ***Adult***:2 tabs at weekly intervals ***Children***: ½ -1 tsp at weekly intervals	4 tabs stat followed by 2 tabs daily for 2 days OR A single dose of 600 mg followed by 300 mg doses 6, 24 and 48 hours later. Up to 1 year: 50 mg 1-4 years: 50-100 mg 5-8 years: 150-200 mg 9-12 years: 200-300 mg (All once a week)
Side Effects	Itching, Nausea, Vomiting,	Headache,

	Giddiness, Headache.	Confusion, Convulsion, Hearing impairment.
Warning	Use with caution in pregnancy and lactation	

ANTIPARASITICS (AMOEBICIDALS)

	TINIDAZOLE **(Fasigyn)**	**METRONIDAZOLE** **(Flagyl)**
Form	Tablet: 300 mg, 500 mg	Tablet: 200 mg, 400 mg Syrup: 200 mg/5 ml (1tsp)
Indication	Amoebic dysentery, Giardia infection, Trichomonas infection	Amoebic dysentery, Giardia infection, Trichomonas infection, Post-operative infections, Dental infections.
Contraindication	Neurological disorders, Pregnancy, Lactation.	Pregnancy, Lactation, CNS disorders, Hypersensitivity
Dose	***Adult***:	
	Amoebic dysentery	Amoebiasis
	4 tabs of 500 mg as single dose for 2-3 days OR	1-2 tabs (400 mg) 3 times a day for 5-7 days
	1 tab of 300 mg twice daily for 5-10 days	Giardiasis
	Giardia infection 4 tabs as single dose	200 mg thrice daily for 5-7 days Trichomoniasis
	Trichomonas infection	5 tabs as single dose or
	4tabs as a single dose for both husband and wife	200 mg 8 hourly for 7 days
	Children:	
	Amoebic dysentery 10-15mg/kg in divided doses 8 hourly for 5-7 days OR	1 tsp thrice a day for 7 days
	50 mg/kg single dose	

Side Effects	Nausea, Vomiting, Loss of appetite, Metallic taste, Skin rash, Dizziness.	Nausea, Vomiting, Metallic taste, Dry mouth, Diarrhoea.
Warning	Use in reduced doses in old age	

ANTIDIARRHOEALS

	ATTAPULGITE (Neo-intestopan)	**KAOLIN and PECTIN (Kaopectate)**
Form	Tablet: 500 mg Syrup: 60 ml	Suspension: /30 ml (Kaolin 5.832 gm;Pecti 0.0130 gm)
Indication	Diarrhoea	Non-Specific diarrhoea, Dysentery
Contraindication	Hypersensitivity, Febrile illness, Less motility of intestine.	
Dose	***Adult:*** 2 tabs stat then 2 tab with every bowel movement OR 2 tbsp stat then 1 tbsp with every stool Children: 1-2 tsp 3-4 times for 5-7 days	2 tbsp to be taken 4 times a day for 2-3 days 1-2 tsp after each bowel movement (3-4 times a day) Not recommended under 6 years
Side Effect	Constipation	Constipation
Warning		Fluid and electrolytes are to be replaced

ANTACIDS

	MAGNESIUM TRISILICATE (Trisil/Gelusil)	**MAGNESIUM HYDROXIDE (Milk of Magnesia)**	**SIMETHICONE (Infacol)**
Form	Tablet: 500 mg	Suspension: 7.9%	Suspension:50mg

Indication	Hyperacidity, Dyspepsia, Heartburns, Gastritis.	Dyspepsia	Dyspepsia, Hiccups, Flatulence, Infant colic
Dose	Adult:		
	1-2 tab to be chewed 3 to 4 times a day, especially after meals	1 tbsp to be taken after every meal	10ml 3-4 times per day before meals Children:
			(6 months - 4 years)
			5 ml before each food intake
Contraindications		Renal Impairment	
Side Effects	Diarrhoea	Diarrhoea	Infants under six months, Dry mouth, Thirst, Dizziness.
Warning	Tablet should not be swallowed. Tablet should not be given to children.		

	ALUMINIUM HYDROXIDE (Alma gel)	**SIMETHICONE + ALUMINIUM HYDROXIDE + MAGNESIUM HYDROXIDE (Simeco)**
Form	Suspension	Tablet, Suspension
Indication	Hyperacidity, Reflex esophagitis, Peptic ulcer, Heart burns, Dyspepsia	Dyspepsia, Hyperacidity, Flatulence
Contraindication		GI Haemorrhage, Pregnancy

Side effect	Constipation	Nausea, Vomiting, Constipation
Dose	***Adult***: 1-2 tsp ***Children***: Above 6 years:1 tsp after meals and at bed time	 2 tab 3-4 times a day after or between meals and at bed time 10 ml suspension after or between meals and at bed time
Warning	Not recommended under six years	

ANTIEMETICS

	MECLIZINE + Vit B6 (Navidoxin)	**PROMETHAZINE THEOCLATE (Avomine)**	**PROMETHAZINE (Phenergan)**
Form	Tablets 25 mg+50 mg	Tablet: 25 mg	Tablet: 25 mg Syrup: 5 mg in 5 ml
Indication	Nausea, Vomiting in pregnancy	Nausea, Vomiting, Motion Sickness, Allergy, Vertigo	Nausea, Vomiting, Urticaria, Allergy.
Contraindication	Hypersensitivity Hepatic and Renal impairment		Urinary retention
Dose	1 tablet 2-3 times a day before meal	For nausea: ***Adult***: 1 tablet SOS <u>For motion sickness:</u> One tablet at bed time before long journey or 1-2 hrs before short journey. ***Children:*** Not recommended	1 tablet twice a day

		under 5 years of age	Under 1 year: not recommended 5-12 years: 2 tsp 2 times a day
Side effects	Drowsiness, Dry mouth, Blurred vision.	Drowsiness	Drowsiness, Dry mouth, Blurred vision, Headache, Hypotension, Sedation
Warning		Do not drive after taking a dose	Do not drive after taking a dose. Do not use in pregnancy and lactation.

	METOCLOPRAMIDE HCl (Maxolon)	**DIMENHYDRINATE (Dramamine/Gravinate)**
Form	Tablet: 10 mg Syp: 5 mg/5 ml	Tablet: 50 mg Syrup: 12.5 mg/5 ml
Indications	Dyspepsia, Flatulence, Nausea, Vomiting.	Nausea, Vomiting, Motion sickness, Vertigo.
Contraindication	GI obstruction, Recent GI surgery.	
Dose	***Adult:*** 1 tab 3 times a day ***Children:*** Up to 59,k g body wt: 5 mg 3 time daily Up to 30 kg body wt: 2 mg 2 time daily Up to 14 kg body wt: 1 mg 2	1-2 tab 2 times a day 6-12 yrs: 2-4 tsp BD or TDS 2-6 yrs: 1tsp OD or BD

	time daily	
Side effect	Drowsiness, Diarrohoea, Rash, Galactorrhoea	Drowsiness Dryness of mouth
Warning	Do not use in pregnancy. Hepatic and Renal impairment.	

ANTISPASMODICS

	HYOSCINE COMPOUND **(Buscopan)**
Form	Tablet: 10 mg Buscopan plus tab: Hyoscine 10 mg, Paracetamol 500 mg
Indication	Colic pain of stomach, intestines, gall bladder, kidney, urinary bladder, uterus, Hiccup.
Contraindication	Acute undiagnosed colic pain, Tachycardia
Dose	1 tab three times a day Under 6 years: Not recommended
Side effect	Dryness of mouth, Increased pulse rate, Vision disturbances
Warning	Use with caution in pregnancy and lactation, Avoid driving when used

ANTHELMINTICS (ANTIPROTOZOALS)

	PYRANTAL PAMOATE (Combantrin)	MEBENDAZOLE (Vermox)	LEVAMISOLE (Ketress)
Form	Tablet: 250 mg Syrup: 250 mg/5 ml	Tablet: 100; 500 mg Suspension:100 mg/5 ml	Tablet: 40 mg Syrup: 40 mg/ 5 ml
Indication	Round worm, Hook worm and Pin worm infestation	Single or mixed infestation due to Round worm, Thread worm or Hook worm	Round worm, Thread worm, Hook worm, Whip worm, Mixed Infestation.
Contraindication	Avoid in pregnancy and lactation, Hypersensitivity	Drug sensitivity, Intestinal obstruction	Pregnancy, Hypersensitivity
Dose	***Adult:*** 3 tabs as a single dose (at night) ***Children***: 1 tsp at night for 3 days	500 mg: 1 tab at night stat 100 mg: 1tab BD for 3 days over 2 yrs: 1 tsp BD for 3 days	3 tabs stat after meal 5-15 yrs: 2 Tsp at night Avoid use in children under 2 yrs of age
Side effect	Nausea, Vomiting, Headache, Diarrhoea, Rashes.	Mild stomach upset, Nausea, Vomiting, Headache, Dizziness, Anorexia.	Mild stomach upset, Abdominal pain, Rash, Urticaria.
Warning	Not to be repeated before 4-6 weeks	Not to be repeated before 4- 6 weeks Do not use in pregnancy unless potential	Not to be repeated before 4-6 weeks

		benefits over weigh the risks In lactating mothers discontinue nursing	

SEDATIVES / TRANQUILLIZERS/antiepileptic agent

	DIAZEPAM (Valium)	BROMAZEPAM (Lexilium,Lexotanil)
Form	Tablet: 2mg, 5 mg	Tablet: 3 mg
Indication	Anxiety, Insomnia	Anxiety, Insomnia
Contraindication	Glaucoma, Psychosis	Glaucoma, Psychosis
Dose	***Adult:*** 2-5 mg at night or 2 times a day ***Children:*** Not recommended	½ - 2 tab daily Not recommended
Side Effect	Sedation, Sleepiness, Depression, Lethargy, Slurred speech, Dry mouth, Diarrhoea, Constipation, Bradycardia.	Drowsiness, Dizziness
Warning	Do not use in depression	

LAXATIVES

	BISACODYL (Dulcolax)
Form	Tablet: 5 mg
Indication	Constipation
Contraindication	Intestinal obstruction
Dose	Adult: 2 tabs at night Children: Under 12 yrs: 1 tab at night
Side effect	Abdominal cramps

HANTITUSSIVES / EXPECTORANTS

	TRIPROLIDINE HCl + PSEUDO EPHEDRINE HCl +DEXTROMETHORPHAN HBr (Actifed-DM)	PHOLCODINE	AMMONIUM CHLORIDE (Pulmonol)
Form	Tablet, Syrup	Syrup	Syrup
Indication	Non-productive cough **(**Antitussive**)** Common cold, Allergy	Non-productive cough **(**Antitussive**)**	Productive cough (Expectorant) Cough associated with various allergic and inflammatory conditions (common cold, bronchitis and asthma)
Dose	***Adult***:		
	1 tab 3 times a day ***Children***:	5-10 ml 3-4 times a day	1-2 tsp 3-4 times a day
	6-12 yrs: 1 ½ tsp 3 times a day	Over 12 years: adult dose	

	1-6 yrs: 1 tsp 3 times a day 3-12 months: ¼ to ½ tsp 3 times a day	3-12 yrs: 2.5- 5 ml 3-4 times a day	½ - 1 tsp 3 -4 times a day
Side effects	Dizziness	Dizziness	Dizziness

VITAMIN / MINERAL SUPPLEMENTS

	VITAMIN A & D **(Seven Seas- Cod Liver Oil it is for omega 3** **Revitale for multivitamin)**	**VITAMIN B COMPLEX**
Form	Capsule, Liquid	Tablet, Syrup, Injection
Indication	Vitamin A & D deficiency, To maintain healthy hair, skin and nails, strong teeth and bones, Good eye sight, Night blindness	Peripheral neuropathies, Stomatitis Beri Beri , Seborrhoea
Contraindication	Pregnancy Hypercalcemia	Hypersensitivity
Dose	*Adult:* 2-3 capsule daily *Children:* 1-2 tsp daily	1-2 tab daily 1-2 tsp daily
Side effect	Abdominal discomfort, Dry mouth, Nausea, Vomiting, Night sweats, Fatigue, Malaise, Vertigo, Headache	Pruritis, Weakness, Urticaria, Allergy, Abdominal pain

	ASCORBIC ACID / VITAMIN C (Ascorbon)	CALCIUM (ossanate)
Form	Tablet: 100 mg 500 mg Drops: 100 mg/ ml Sachet :500 mg	Tablet: 300 mg, 500 mg Syrup: 110 mg/5 ml Injection:10 ml Sachet :500 mg
Indication	As a dietary supplement in severe infections, For healing of wounds, Scurvy, Dental caries	Malnutrition, Pregnancy, lactation Muscle cramps, Tetany, Pre- Eclampsia, Rickets, Osteomalacia, Osteoporosis
Dose	***Adult:*** 1-2 tabs daily **Infant:** 2 drops twice daily ***Children:*** 1 tsp 3 times a day	Should not be given within two hours of iron and vice versa 1 tab. 3 times a day 1 tsp 3 times a day Up to half of adult dose
Side Effect	Diarrhoea, Renal stones may develop	Stomach irritation, Kidney stone formation, Diarrhoea

	IRON **(Ferrous Fumarate, Ferrous Sulphate, Ferrous Gluconate)**
Form	**Tabs/Syrup/Drops:** Ferrous Fumarate 100 mg Ferrous Sulphate 200 mg **Injection:** Also available Preparation of iron alone or in combination with vitamins & folic acid are available
Indication	Iron deficiency anaemia, Pregnancy, Lactation, Patients with chronic illnesses
Contraindication	Haemolytic Anaemias,
Side Effect	GI disturbances
Dose:	**Adult:** Ferrous Sulphate 200-600 mg/day 1-2 tab 2-3 times a day Ferrous Fumarate 100-300 mg/day 1 tab 2-3 times a day **Children:** Syp: 3-6 mg/kg/day in 2-3 divided doses **OR** ½ - 1 tsp 2-3 times D ay Drops:0.3 ml daily
	Side effect: Nausea Epigastric distress Diarrhoea Black stools

Note: Vitamin C 200mg per 30 mg of iron enhances the absorption of iron from GI tract. Since oral iron interferes with the absorption of tetracycline, these products should not be taken within two hours of each other. Calcium product should not be taken within two hours of iron

FOLIC ACID

Form	Tablet 5 mg
Indications	Prevention and treatment of Iron deficiency anaemia
Dose	1 tablet 2 times a day
Side Effects	-
Warning	Oral contraceptives may cause folic acid deficiency

EYE PREPARATIONS

	SULPHACETAMIDE (Sulphamed)	**CHLORAMPHENICOL**	**POLYMIXIN B SULPHATE (Polyfax)**
Form	Drops: 10%; 20%	Drops: 0.5% Ointment: 1%	Ointment
Indication	Eye infections, Watery eyes, Stye, Corneal ulcer	Conjunctivitis, Eye infections	Conjunctivitis, Eye infections, Prophylaxis in eye injury.
Contraindications	Do not give if allergic to sulpha drugs	Hypersensitivity	-
Dose	***Adult*:** 1-2 drops 3-4 times a day ***Children:*** 1-2 drops 3-4 times a day (10%)	2-3 drops 3-4 times a day 2-3 drops 3 times a day (0.5%)	1-2 applications a day 1-2 applications a day

EAR PREPARATIONS

	POLYMIXIN B SULPHATE + LIGNOCAINE (Lidosporin)	POLYMIXIN B SULPHATE + NEOMYCIN SULPHATE + STEROID (OTOSPORIN)
Form	**Form:** Ear Drops	Ear Drops
Indication	Earache, Boil in ear, Infection in the ear, Otitis externa	Inflammatory Otitis externa
Contraindication	Perforation of ear drum, Discharge from the ear	Discharge from the ear
Dose	***Adult:*** 1-2 drops 2-3 times a day ***Children:*** 1-2 drops 2-3 times a day	2 drops 3- 4 times a day

ORAL PREPARATIONS

	(NYSTATIN) *(Nilstat)*
Form	Tablets: 500000 IU Oral drops: 10000 IU/ ml
Indication	Oral, oesophageal and intestinal candidiasis
Contraindication	

Dose	***Adult:*** 1-2 tablets 4 times a day 1 dropper 2-3 times a day ***Children:*** 1-5 ml 4 times a day
Side effect	Nausea, Vomiting, Diarrhoea

LOCAL SKIN PREPARATIONS

	POLYMYXIN B SULPHATE + BACITRACIN (Polyfax)
Form	Ointment
Indication	Skin infections
Contraindication	Large open wounds
Dose	Apply 2 or more times daily

	PERMETHRIN 5% **(Lotrix)**	**CROTAMITON + SULPHUR** **(Scabion)**	**LINDANE** **(Scabene)**
Form	Cream	Cream Lotion	Cream Lotion
Indication	Scabies	Scabies, Pruritis	Scabies, Pediculosis
Contraindication	Hypersensitivity to drug	Hypersensitivity to drug. Do not apply on nipple area.	Severely broken skin. Avoid eyes. Avoid use in pregnancy.

Dose	Apply once to whole body except head and face. Wash out after 8-24 hrs 2nd application, if needed.	Rub into affected parts 2-3 times a day.	After thorough cleaning, apply to whole body except head and face. Wash after 24 hours.

DRUGS ACTING ON THE REPRODUCTIVE SYSTEM

	CLOTRIMAZOLE **(Gynosporin/ Canesten/ Vagamycin)**	**NYSTATIN** **(Nilstat)**	**METHYL ERGOMETRINE** **(Methergine)**
Form	Pessary (vaginal tablet):100mg, 500mg Vaginal Cream	Pessary (vaginal tablet): 100,000 IU	Tablet: 0.125 mg Injection: 0.2 mg/ 1ml
Indication	Candidiasis Trichomoniasis Vaginitis (non specific) Mixed vaginal infections	Vulvo-vaginal Candidiasis	To control: - Post partum Haemorrhage, Relaxed uterus after delivery, Management of puerperium.
Contraindication	Hypersensitivity Use with caution in pregnancy	Hypersensitivity Use with caution in pregnancy	
Dose	<u>Pessary/Tablet</u>:		
	100 mg tab to be inserted as deeply as possible into vagina for 6-7 consecutive nights OR	1-2 pessaries into vagina at night for 10-14 days	0.5 ml I/V or 1 ml I/M after delivery of placenta

	500 mg for 1 night Vaginal cream with applicator:		1 tab 3 times a day for 3 days in puerperium
	One full applicator intra- vaginally at bed time for 7-14 consecutive days.		
	(not to be inserted during menses)		
Side Effect	Local irritation and burning	Occasionally burning sensation /irritation	-
Warning			Do not give before delivery
	SULPHONAMIDE (Sulpha kream N)		
Form	Vaginal cream 15%		
Indication	Non- specific and mixed bacterial vaginitis		
Contraindication	Sulphonamide sensitivity		
Dose	1 applicator full intra vaginally twice daily		

DRUGS FOR URINARY INFECTION

	PIPEMIDIC ACID (Urixin)	**SODIUM ACID CITRATE (Sioalkali/ Citralka)**
Form	Tablet: 400 mg	Syp: 1.25 mg / 5 ml
Indication	Acute painful infection of genito - urinary tract	Acidosis, Pyelitis, To render the urine less acidic and to promote disuresis.
Contraindications		
Dose	***Adult:*** 1 tab 2 times a day for 10 days ***Children:*** 14 yrs and above: same as	2 tsp 4 times a day

	adult dose	
Side Effect	Nausea, Abdominal pain	
Warning	Avoid direct sunlight during therapy	

ANTIHAEMORRHAGIC

	TRANEXAMIC ACID (Transamine/Traxyl)
Form	Capsule: 250 mg, 500 mg
Indication	Abnormal bleeding, Menorrhagia
Dose	1-2 capsules 3-4 times a day (3-8 cap/ day)
Special Precautions	Renal impairment, Pregnancy/ lactation, Patient with risk of thrombosis
Side Effects	Hypersensitivity, Rash, Nausea, Vomiting, Diarrhoea

13.7 PRESCRIPTION WRITING

13.7 PRESCRIPTION WRITING

Prescription is a written direction from a registered medical practitioner to a pharmacist for preparing and dispensing drugs. The prescription has the following main parts:

Superscription:

This is the information about patient, her/his complaints, and provisional diagnosis.

Rx:

This is the abbreviation of receipe, meaning “take thou”.

Inscription:

This indicates the names of drugs, their quantity and contains the directions for use to the patient, such as “take one teaspoonful three times a day before meals”.

Subscription:

This contains the directions for dispensing or any other advice.

Signature (Sig.):

This is often abbreviated as Sig.

Always write your name and instructions clearly

Always date your perscription

o.d (once daily	**p.c (post cibus) after meals**
b.d (bis in dies) twice daily	a.c (ante cibus) before meals
t.d.s(ter in dies sumedus) to be taken three times a day	p.r.n (pro re nata) when required
t.i.d (ter in dies) thrice daily	o.n (omni nocte) every night
q.i.d (quarter in dies) four times daily	o.m (omni mane) every morning
s.o.s (si opus sit) whenever required .	q.h (quartis horis) every hr
stat (statim) at once as soon as possible	

PRESCRIPTION FORMAT

Superscription:

Name of Patient: _____

Father / Husband Name: _____

Age: _____

Sex: _____

Address: _____

_____

_____

Complaints: _____

_____

_____

Diagnosis _____

Rx:

Inscription _____

_____

_____

Subscription:

Signature _____

Signature: _____
Initial of health provider

Date:- _____

SAMPLE OF PRESCRIPTION

Superscription

Name of patient	Razia Begum w/o Rehmat Ali
Age:	26 Years
Sex:	Female
Address:	House # 34, Street # 4, Block A, Township, Lahore.
Complaints:	Pain lower abdomen, vaginal discharge and fever.
Diagnosis:	PID

Rx:

Recipe

Oxytetracycline Caps 250 mg (20 caps)

1 capsule 6 hourly before meals for 5 days

Subscription

Paracetamol tablets (15 tabs)

1 tablet t.d.s for 5 days.

Plenty of fluids and balanced diet. Improve personal hygiene.

Report after 5 days or earlier if required.

Signature _____

Name _____

Date _____

PRECAUTIONS IN USE OF DRUGS

1) Ensure proper storage of drugs.
2) Follow the instructions given by the manufacturing company.
3) Follow the instructions of the Health Provider.
4) Before giving a medicine, the label should be read carefully.
5) Give a test dose of medicine where required.
6) If medicine causes any bad effect such as nausea, vomiting, headaches; omit the next doze and notify the doctor.
7) Allergy producing drugs should not be given until proper history of allergy and hypersensitivity is taken.

13.8 INSERTION OF VAGINAL TABLET

13.8 INSERTION OF VAGINAL TABLET

- Perform hand hygiene.
- Check room for additional precautions.
- Introduce yourself to patient.
- Confirm patient ID using two patient identifiers (e.g., name and date of birth).
- Check allergy band for any allergies.
- Complete necessary focused assessments and/or vital signs, and document on MAR.
- Provide patient education as necessary.
- Plan medication administration to avoid disruption:
- Dispense medication in a quiet area.
- Avoid conversation with others.
- Follow agency's no-interruption zone policy.
- Prepare medications for ONE patient at a time.
- Follow the SEVEN RIGHTS of medication administration

This medicine should come with patient instructions. Read and follow these instructions carefully. Ask your doctor if you have any questions.

In addition to the suppository, you'll need soap, water, and a towel. You may also want sanitary napkins.

Step-by-step instructions

You can use these instructions to give yourself a vaginal suppository. If you're a caregiver, you can also use these steps to give a suppository to another person.

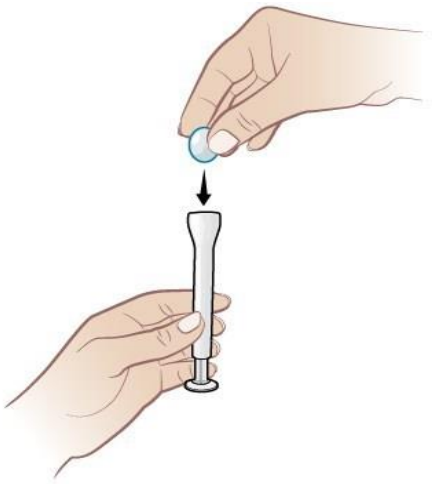
Preparing

1) Wash your vaginal area and hands with mild soap and warm water, and dry well with a clean towel.

2) Remove any wrapping from the suppository.

3) Place the suppository onto the end of the applicator. If you're using a pre-filled suppository applicator, skip this step. A pre-filled applicator already contains medication.

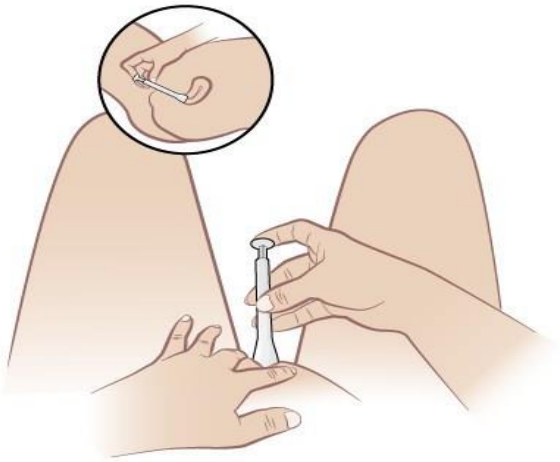
4) Hold the applicator by the end that does not contain the suppository.



Inserting the suppository

1) Get into position. You can either lie on your back with your knees bent, or you can stand with your knees bent and your feet a few inches apart. If you're a caregiver, the first position may be best for your patient or loved one.

2) Gently insert the applicator into the vagina as far as it will comfortably go.



3) Press the applicator's plunger as far as it goes. This will push the suppository far

back into your vagina.

4) Remove the applicator from your vagina.

Finishing up

1) If the applicator is reusable, clean it as directed by the package instructions. If it's not reusable, throw it away into a trash can.
2) Throw away all other used material.
3) Wash your hands right away with soap and warm water.

Helpful tips

- Vaginal suppositories can leak, so they're more convenient to use at bedtime. You can wear a sanitary napkin to help protect your bed linens or clothing.
- It may help to dip the suppository in water quickly before using it. This can make it easier to insert.
- To keep your suppositories from melting before use, store them in a cool place. Keep them in the refrigerator if the medication label says to do so.
- Use the medication for as long as directed by your doctor or by the product instructions.
- You can use a vaginal suppository during your period.
- Don't use tampons when using a vaginal suppository. Tampons can absorb some of the medication. This can prevent the suppository from working well.

To use the vaginal cream:

- The vaginal cream comes in a tube. You will use an applicator to put the cream into your vagina.
- The applicator is an empty plastic tube called a barrel. There is a plunger on one end and an opening on the other end.
- Wash your hands before and after using this medicine.
- Remove the cap from the end of the tube. Screw the open end of the applicator onto the tube of cream.
- Squeeze the tube and fill the applicator until it is full or the plunger stops.
- Unscrew the applicator from the tube and replace the cap on the tube.
- To use the applicator: Lie on your back with your knees drawn up toward your chest. Hold the applicator by the open end of the barrel and gently insert it into the vagina as far as it will comfortably go. Slowly press the plunger of the applicator to release the cream into the vagina, and then gently remove it.
- After using, pull the plunger completely out of the applicator and wash both pieces with lukewarm, soapy water, and dry thoroughly.
- If the medicine comes with disposable applicators, use each applicator only once,

and then throw it away.

To use the vaginal suppository:

- The oval-shaped suppositories may be inserted with or without an applicator.
- Wash your hands before and after using this medicine.
- If you are using it with an applicator, unwrap the tablet and place the flat end of the suppository into the open end of the applicator. Then, lie on your back with knees drawn up toward your chest. Gently insert the applicator high into the vagina and push the plunger to release the tablet. After using, pull the plunger completely out of the applicator and wash both pieces with lukewarm, soapy water and dry thoroughly. If the medicine comes with disposable applicators, use each applicator only once, and then throw it away.
- If you are inserting the tablet without an applicator, lie on your back with knees towards your chest, and place the suppository on the tip of your finger. Gently insert the suppository high into the vagina as far as it will comfortably go.

Avoid wearing tight trousers, nylon underwear and panties which can cause yeast infection. Instead, wear looser pants or skirts, dry and clean cotton underwear, and stockings to avoid this problem.

This medicine may leak out of your vagina during the day. You may wear a sanitary pad to protect your clothing, but do not use a tampon. Keep using this medicine for the full time of treatment, even if your symptoms improve after the first few doses. Do not stop using the medicine if your menstrual period begins during your treatment time. Use sanitary pads rather than tampons.

Dosing

The dose of this medicine will be different for different patients. Follow your doctor's orders or the directions on the label. The following information includes only the average doses of this medicine. If your dose is different, do not change it unless your doctor tells you to do so.

The amount of medicine that you take depends on the strength of the medicine. Also, the number of doses you take each day, the time allowed between doses, and the length of time you take the medicine depend on the medical problem for which you are using the medicine.

- For vaginal yeast infections:
- For vaginal dosage form (cream):
- Adults—One full applicator (5 grams) applied in the vagina once a day at bedtime for 3 or 7 consecutive days, as directed by your doctor.
- Children—Use and dose must be determined by your doctor.
- For vaginal dosage form (suppository):
- Adults—One suppository inserted in the vagina once a day at bedtime for 3 consecutive days. Each suppository contains 80 milligrams (mg) of terconazole.
- Children—Use and dose must be determined by your doctor.

Missed Dose

If you miss a dose of this medicine, apply it as soon as possible. However, if it is almost time for your next dose, skip the missed dose and go back to your regular dosing schedule.

Storage

Store the medicine in a closed container at room temperature, away from heat, moisture, and direct light. Keep from freezing.

Keep out of the reach of children. Do not keep outdated medicine or medicine no longer needed.

13.9 DRUGS CONTRAINDICATED IN PREGNANCY

13.9 DRUGS CONTRAINDICATED IN PREGNANCY

DRUGS	EFFECTS
Antibacterial drugs:	
Tetracycline, Aminoglycosides, Novobiocin, Sulfonamides	Dental discoloration, 8th nerve damage, jaundice, kernicterus
Antithyroid drugs:	
Iodides, carbimazole, lithium	Neonatal hypothyroidism
Anticoagulants:	
Warfarin	Foetal and neonatal haemorrhage
Hypoglycaemics:	
Sulphonylureas	Neonatal hypoglycaemia
Cardiovascular drugs:	

DRUGS	EFFECTS
Antihypertensive drugs Reserpine	Foetal tachycardia, delayed labour Foetal and neonatal bradycardia, impaired adrenergic function
Central nervous system drugs:	
Narcotics. alcoholics. barbiturates and benzodiazepines	Central nervous system depression, withdrawal symptoms
Corticosteroids and sex hormones:	
Steroids, androgens	Foetal and neonatal adrenal suppression, virilization of female foetus
Non-steroidal anti-inflammatory drugs	Premature closure of foetal ductus arteriosus. Delayed labour, increased blood loss
Misoprostol	Miscarriage in early pregnancy and uterine hyper contractility in later part
Some drugs used during the first three months of pregnancy cause congenital abnormalities and are said to be teratogenics	
POSSIBLE TERATOGENICS	
Inhalation anaesthetics, vitamin A, progestogens, some vaccines, radiographic dyes, progesterone (high doses)	

DEFINITE OR STRONGLY SUSPECTED TERATOGENICS	
Thalidomide, anticonvulsants, antineoplastic drugs, oestrogens, stilbestrol, androgenic steroid, alcohol, warfarin, lithium, organic mercury	

13.10 FIVE RIGHTS OF MEDICATION

13.10 FIVE RIGHTS OF MEDICATION

As FWW it is crucial that you always remember seven rights when giving drugs to ensure safety of patients and achieve optimum results:

The right patient

The right patient: check that you have the correct patient using two patient identifiers (e.g., name and date of birth).

Check identity and ensure he / she is the right person to whom medicine is given.

The right medication

check that you have the correct medication and that it is appropriate for the patient in the current context.

It is equally important that the exact drug prescribed is administered.

The right dose

Check that the dose makes sense for the age, size, and condition of the patient.

Different dosages may be indicated for different conditions. Ensure that the drug is administered in the proper dose, not less and not more, at proper intervals, as prescribed by the health provider to obtain the required blood levels.

The right route:

check that the route is appropriate for the patient's current condition.

The drug should be administered through the right route to achieve maximum efficacy and avoid complications and risks.

The right time:

adhere to the prescribed dose and schedule.

Make sure that the medicine is given at the right time / proper intervals as directed; so as to maintain an optimum concentration in the blood, to be effective and give desired results.

The right reason:

check that the patient is receiving the medication for the appropriate reason.

The right documentation:

always verify any unclear or inaccurate documentation prior to administering medications.

NEVER document that you have given a medication until you have actually administered it.

13.11 DISPENSING

13.11 DISPENSING

CHECKLIST FOR DISPENSING DRUGS

Once the diagnosis has been made and the drug(s) involved for the treatment have been identified, the FWW:

	Yes	No
1. Explains to the patient explicitly:	_____	_____
• What the specific drug(s) is/are	_____	_____
• How it will help her in her present condition	_____	_____
• When it is to be taken i.e., before meals, after meals	_____	_____
• How it is to be taken (orally/local application)	_____	_____
• If two or more medicines are given, the FWW:	_____	_____
- wraps each medicine in a separate packet	_____	_____
- marks each packet for identification	_____	_____
2. Confirms that the patient has understood; if not, repeats the instruction	_____	_____
3. Notes down the medicines dispensed against	_____	_____
4. Advises the patient to come immediately in case the condition deteriorates further	_____	_____

MANNERISM

1. Uses simple language	_____	_____
2. Reassures the patient	_____	_____
3. Is sympathetic and shows concern	_____	_____

13.12 STOCK REGISTER FOR GENERAL MEDICINES

13.12 STOCK REGISTER FOR GENERAL MEDICINES

The instructions for maintaining the Stock Register for General Medicines are the same as that for maintaining Contraceptive Stock Register except counting unit of each medicine. As there are various medicines supplied / dispensed by the Family Welfare Centre therefore, it is not possible to enlist here each counting unit. However, the best clue to tackle this situation is to use the same counting unit for each medicine.

MEDICINE STOCK REGISTER

Name of Medicine

Date	Opening Balance	Quantity Received	Total	Quantity Issued	Closing Balance	Details of Receipts & Issues	Remarks	Signature
1	2	3	4	5	6	7	8	9

MEDICINES INDENT VOUCHER

Voucher No. _____ Dated: _____

S.No.	Description of Items	Previous Balance	Quantity Required	Quantity Delivered	Remarks
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

For approval please
Principal ----------
Issued the above mentioned
Items under col: No. 5.

Requisitioner's Name --------
Designation ----------
Received the above mentioned
Items under col: No. 5.

Storekeeper ----------

Receiver----------

STORAGE OF MEDICINES

While storing medicines in F.W.C, observe the following guidelines:

1) Always keep the medicines in a locked cupboard and take them out only when needed.
2) Keep all the medicine bottles clean in the cupboard.
3) Dangerous drugs should be locked in a separate cupboard.
4) Avoid keeping medicines and contraceptives together.
5) Keep the medicines in their original bottles and covers which should not be changed.
6) Each bottle of medicine should have a label on it with name of medicine and its strength. To protect the label, cover it with a transparent tape.
7) Keep the medicines in alphabetical order in the cupboard so that it is easy to find the bottle of medicine without wasting time.
8) Enter into stock register whenever anything comes in or goes out.

9) Note the expiry dates.

10) After the expiry period, discard the medicine.

11) Store separately, item by item.

12) Avoid keeping supplies in direct sunlight e.g., medicines, condoms etc.

13) Ventilate store room well.

14) Separate supplies by lots and in a manner assessable for “First-expiry, First-out” (FEFO), counting and general management.

15) Separate and dispose of damaged and condemned supplies without delay.

OBSERVATIONS TO BE MADE WHILE VISITING THE FW CENTRE

During the visit to the F.W. Centre, the trainees will observe, ask questions and seek the answers in order to learn the correct practice for indenting stocks, storing / handling of medicines and maintaining the stocks of medicines at the F.W. Centre.

Ask the FWW how the medicines are indented and supplied?

- Who brings the medicines?
- How often the medicines are supplied?
- Monthly
- Quarterly

Observe to learn how the medicines are stored

- Stored in a cool (preferably dark) place
- Kept under lock and key
- Labeled carefully (especially when taken out from bulk packing and replaced in a smaller bottle for day-to-day dispensing)
- Handled hygienically
- Are the supplied quantities sufficient to meet the needs of the F.W. Centre?
- If insufficient, how does the F.W.W. In charge manage with short supplies? (Note the procedure for future reference and guidance).
- Does she maintain a stock register for medicines? Observe how it is maintained?
- What are the other problems encountered by the FWW in respect of medicines?
- How does she cope with the above problems?
- (Make a note for future reference and guidance, so that you are well prepared to cope in similar situation).

13.13 MEDICATION ERRORS

13.13 MEDICATION ERRORS

WHO

Medication Errors: Technical Series on Safer Primary Care. Geneva: World Health Organization

Provision of safe primary care is a priority. Understanding the magnitude and nature of harm in primary care is important because most health care is now offered in this setting. Good primary care may lead to fewer avoidable hospitalizations, but unsafe primary care can cause avoidable illness and injury, leading to unnecessary hospitalizations, and in some cases, disability and even death

Medications are offered by health services throughout the world. However, with substantial and increasing medication use comes a growing risk of harm. This is compounded by the need to prescribe for an ageing population with increasingly complex medical needs and the introduction of many new medications. These issues are particularly relevant in primary care. In many cases, prescribing is initiated in primary care and those initiated in the hospital may also be continued in primary care medication errors are associated with increasing number of medications, to childhood and older age, and specific medications for certain disease states (e.g., musculoskeletal, oncology and immunosuppression, dermatology, ophthalmology, otolaryngologic conditions, infections and cardiovascular)

FACTORS INFLUENCING MEDICATION ERRORS

Factors associated with health care professionals

Lack of therapeutic training
Inadequate drug knowledge and experience
Inadequate knowledge of the patient
Inadequate perception of risk
Overworked or fatigued health care professionals
Physical and emotional health issues
Poor communication between health care professional and with patients

Factors associated with patients

Patient characteristics (e.g., personality, literacy and language barriers)
Complexity of clinical case, including multiple health conditions, polypharmacy, and high-risk medications

Factors associated with the work environment

Workload and time pressures
Distractions and interruptions (by both primary care staff and patients)
Lack of standardized protocols and procedures
Insufficient resources
Issues with the physical work environment (e.g., lighting, temperature and ventilation)

Factors associated with medicines

Naming of medicines
Labelling and packaging

Factors associated with tasks

Repetitive systems for ordering, processing and authorization
Patient monitoring (dependent on practice, patient, other health care settings, prescriber)

Factors associated with computerized information systems

Difficult processes for generating first prescriptions (e.g., drug pick lists, default dose regimens and missed alerts)
Difficult processes for generating correct repeat prescriptions
Lack of accuracy of patient records
Inadequate design that allows for human error

WHAT TO DO ABOUT IT

Several factors may contribute to errors in primary care, including those pertinent to the health care professionals, patient, work environment, medicines as a product, tasks, computerized information systems and primary-secondary care interface. This presents a range of opportunities for interventions. In terms of reducing error rates, those provided by clinical pharmacists are promising approaches.

In addition to health systems strengthening, we should consider prioritizing the following strategies to reduce medication errors in primary care:

1. Educating health care providers and patients

Educating primary care providers about common causes of medication errors
Providing simple tools to assist primary care providers in safe medication prescribing and use process
Considering how patients can be actively involved in medicine management
Providing patient engagement tools to address non-adherence.

2. Implementing medication reviews and reconciliation

Ensuring that pharmacists actively review prescriptions.
Encouraging and supporting use of medication reconciliation by clinicians.

3. Using computerized systems

Strengthening electronic prescribing and alert systems. Computerized provider order entry with decision support may be particularly effective when targeted ata limited number of potentially inappropriate medications and when designed to reduce the alert burden by focusing on clinically relevant warnings.

4. Prioritizing areas for quick wins

Target use of injections as a key source of errors.
Target interventions related to the care of children and the elderly.
Implement multicomponent interventions with a mix of education, health informatics, medication reviews and involvement of community pharmacists.

Consider specialist outpatient clinics for the prescription of selected medications that require routine monitoring, such as warfarin.

Conduct further research on medication errors to develop a better understanding of the causes, generate evidence for interventions impacting on adverse outcomes, and to help bridge knowledge gaps in low- and middle-income countries on injection use and the specificities of the paediatric population.

13.14 EFFECTS OF EXCESSIVE OR IMPROPER USE OF ANTIBIOTICS

13.14 EFFECTS OF EXCESSIVE OR IMPROPER USE OF ANTIBIOTICS

These antimicrobial substances, while often referred to as “miracle drugs,” are not without their disadvantages. The danger of antibiotic-resistance has already been mentioned. Sensitivities or allergies that cause serious reactions to the drugs may develop in human beings. This is especially true of penicillin group. Several produce serious toxic side effects if their administration is not carefully controlled.

One unfortunate side effect of the administration of antibiotics in large, prolonged dosages is seen as a disturbance of the normal host-parasite relationships. Micro-organisms that ordinarily remain restricted harmlessly to the skin or mucous membranes find an opportunity to setup an infection, possibly because competing micro-organisms that ordinarily hold them in check are suppressed by the antibiotic or for other reasons that are entirely obscure. Fungi, especially Candida albicans are harmlessly present in the normal intestine or vagina, often setup distressing gastrointestinal or vaginal super infections in such circumstances. Staphylococci, ordinarily not important in the intestine, sometimes grow there excessively, producing severe and even fatal enteritis when competing micro-organisms of the gut are suppressed by antibiotics in preparation for surgery of the gastrointestinal tract. Antibiotics are not harmless and should be used under medical supervision.These agents should be used only where definitely indicated and not for any and every infection. In some critical cases, the doctor may have to make a diagnosis on the basis of the clinical picture before laboratory reports are available. In these cases, the doctor may have to choose an antimicrobial agent most likely to be effective before the causative agent is known. However, even in these cases, it is advisable to attempt to find the causative organisms rather than to continue to treat blindly. It is also essential to know whether the particular strain of organism causing the infection is or is not wholly resistant to the drug chosen for use. This can be determined in the bacteriologic laboratory by procedures called “Sensitivity testing”.

SECTION FOURTEEN

HEALTH EDUCATION

14.1 HEALTH EDUCATION

14.1 HEALTH EDUCATION

Health education is a process that informs, motivates and helps people to adopt and maintain healthy practices and lifestyles. It also advocates environmental changes as needed to facilitate the goal and to conduct professional training and research.

It is also defined as the translation of what is known about health into desirable individual and community behavioural pattern by means of the education process. In other words, it is any form of education, with a positive impact on social, physical, emotional, environmental or value-oriented aspects of an individual. This positive impact on an individual results in favourable behaviour change leading to good health.

Health education is a combination of activities designed to facilitate voluntary adaptations of behaviour in individuals, groups or communities conducive to the promotion, maintenance, or restoration of health. It also advocates environmental changes as needed to facilitate the goal and to conduct professional training and research.

Health education forms an important part of the health promotion activities. These activities occur in schools, workplaces, clinics and communities and include topics such as healthy eating, physical activity, tobacco use prevention, mental health, HIV/AIDS prevention and safety

One of the key aspects of the work of FWW is Health Education. The purpose is to collect the ideas which have been learnt previously and put them in a proper framework. Health education is not simply “giving a health talk”. It is the whole process of deciding about the clients’ needs, why the clients are not behaving in the desired way, which behaviour should be changed and then decide the different activities which the FWW could perform to bring about this desired change.

Persons responsible for health education:

It is the duty of all conscientious persons dealing with other individuals in everyday life for health education. One may say that the process of educating and, getting educated starts at birth and ends at death of every individual. In childhood it is the responsibility of the mother, father and other elders to educate their children for developing healthy behaviours. As a child grows, the responsibility extends from the family to the surrounding social environment and the key people in that environment. This process goes on and finally the grown-up adolescent then becomes responsible for others. As time changes and new research lead to advances in health technology, more is known about the emerging risk factors. The propagation of this technology, through relevant health education messages is then the responsibility of health professionals.

Aims of Health Education:

Health Education aims to produce positive behaviour changes in individuals and communities. Health education is a tool which enables people to take more control over their own health, and other factors (environmental, social, personal, etc.) which affect their health. Health education is not only the process by which knowledge is obtained, but it is also the process by which values and attitudes are explored, decisions are made and actions are

taken. It leads to self-empowerment.

The principal aims of health education are to:

1) Ensure that the community accepts Health Education as an asset
2) Equip the individual with skill and knowledge
3) Promote the development of Health Education itself
4) Help people to achieve health by their own actions and efforts
5) Provide the individual with an attitude which strives and longs for healthy life style and create responsibility for one's own health, of his family and of the community in which he lives and the realization of one's habits which affect the health of neighbours
6) Inform about psychological and social influences and the methods by which harmful effects could be overcome by personal or community efforts
7) Provide knowledge about the modes of spread of infection, their prevention and if they cannot be prevented, the methods by which body can be prepared to resist them
8) Provide knowledge on parental responsibility to preserve and promote the health of future generations.

Importance of Health Education:

Health education helps at all three levels of prevention. Health education is essential if people are to learn how to live a healthy life and avoid diseases. It helps people care about their own health and take part in organizing health services and disease control programs Health education can help people realize that health and health services are the basic human rights. It can help them understand the importance of health services for development.

Three Levels of Prevention

Primary Prevention:

Health education enables people to value their health, and to know about diseases and how to make the best use of the organized health services, such as MCH clinics. It can motivate them to practice hygienic personal habits and healthy behaviour for themselves like using safe water, mosquito nets and child spacing. It can encourage people to care for their own environment, such as water supplies and excreta disposal. Health education can also help medical workers to understand what the people want and by working together they can develop a healthier life.

Secondary Prevention:

Health education can help people understand and value different screening procedures, such as those involved in MCH services. It can help people recognize the symptoms and signs of important diseases like tuberculosis, hepatitis B&C, and it can help them co-operate in reporting disease surveillance programmes for diseases like polio, measles, rabies and malaria.

Tertiary Prevention:

Health education can help people to understand diseases better and co- operate with the medical services to continue treatment of tuberculosis until cured. While people are attending for treatment, health education can also teach new knowledge about how to prevent diseases such as malaria and gastroenteritis.

The role of FWW

Yours is a very important role to play in spreading the correct knowledge into the community

a) Explains to patients and relatives about the disease and why it has occurred
b) Explains prescriptions for treatment how, why, when & how much medicines to take
c) Advises on changing harmful health behaviour e.g. smoking, drug addiction etc.
d) Encourages civic action to provide a healthy environment.

14.2 STAGES OF HEALTH EDUCATION

14.2 STAGES OF HEALTH EDUCATION

Sensitization:

First and foremost is to sensitize people on emergent issue with messages that, “AIDS causes Death”, “Polio can lead to Disability” etc. Positive messages should be used instead of negative terrorizing messages and announcements which are still used worldwide. Mostly terrorizing messages are immediately noticed by people and the general belief is that such messages can sensitize majority of illiterate people.

Publicity:

The next stage after sensitization is publicity. In this stage media and all possible means of advertising are used for providing information to the public on the subject. In this stage people who are receptive to the disease, absorb and understand the implications of the disease. The idea of publicity is that, people discuss among themselves and become more knowledgeable.

Education:

The third step is the stage of real education for the disinterested and illiterate people. The health education that has to be imparted to the masses in the communities particularly in Pakistan has to be done through the leaders in the community like the Imam, Vaddera, and Schoolmaster etc who could convince the people with the help of health educators. The local leaders should be approached first and convinced so that they could educate people in their own words and direct them to act. During this stage, as the campaign may be going on electronic and print media etc., such sessions with the people are essential for convincing them to take action in the right direction for preventing the spread of diseases and improving the general health of the communities.

Motivation and Action:

Once the adequate knowledge is provided to the people and they have developed a positive attitude, their actions in the right direction have to be aided urging them to change the behaviour. For this purpose the appeal to emotions such as fear, jealousy or ambition, works satisfactorily provided these emotions are intelligently exploited by the health educator for inciting them. This process has to be persuasive for people to eventually act for the betterment of their health. It is believed that once the motivation is incited, the action in the right direction takes place and that further motivates the individuals and families to continue such behaviour. As more positive actions are taken the positive reinforcement towards the healthy behavioural change takes place.

Change in attitude:

As a result of motivation and actions into the direction of positive behavioural change, the attitude of the people towards their own good health changes. As more and more people adopt healthy changes and see the change in their health, the onlookers and other sensitized and informed people start changing their behaviour also. The people who have achieved the healthy change and are happy with themselves then motivate others and themselves become more convinced of the healthy actions for improving health and preventing disease.

Community Transformation (Social Change):

After all these stages have been achieved, the whole community is then transformed into a healthy community. The recent example is that of changes in the general behaviour of people regarding smokers. Previously, smoking was considered normal, and no one objected smokers in parties or public gathering. Now people avoid smoking in front of other members of the family and also do not usually publicize their addiction. In some situations, the social change can also be brought about by laws enacted by the government and punishments for negative behaviours.

PRINCIPLES OF HEALTH EDUCATION

Health education involves teaching, learning and inculcating habits concerned with the objective of healthy living. Learning and teaching is a two-way process between the teacher and the student. The teacher can't teach unless the pupil wants to learn. There are certain principles of learning and teaching that should be borne in mind before imparting health education to people. These are: -

Interest:

It is a psychological principle that people do not like to listen to those things which are not of their interest. So, health teaching should relate to the interests of people. Health educators must find out the real health needs of people that they feel about themselves called "felt needs". If a health program is based on "felt needs", people will gladly participate in it and only then it will be a people's program. Very likely there are groups who may have health needs of which they are not aware. Health educator will have to bring about recognition of the needs before they proceed to tackle them.

Participation:

It is a key word in health education and is based on the psychological principle of active learning. It is better than passive learning. Group discussion and workshops provide opportunities for active learning. Personal involvement is more likely to lead to personal acceptance.

Known to unknown:

In health education, we proceed from known to unknown i.e., start with where people are and what they understand and then proceed to new knowledge. We use the existing knowledge of people as pe gs on which to hang new knowledge. In this way systematic knowledge is built up. New knowledge will bring about a new, enlarged understanding, which can give rise to an insight into the problem. It is a long process full of obstacles and we must not expect quick results.

Comprehension:

In health education, we must know the level of understanding and education of people to whom teaching is directed. One barrier to communication is using words, which can't be understood, e.g., a doctor asked a diabetic patient to cut down starchy foods. A patient does not know what starchy foods are, hence, the doctor should name the foods which are to be

avoided by the patient i.e., rice, sugar, wheat flour etc. A doctor prescribed medicine as “One teaspoonful three times a day”. A village woman may not differentiate between table and teaspoon and thus may not follow doctor’s directions. In health education we should always communicate in the simple language that people understand and should avoid using words that are strange and new to them. Teaching should be according to the mental capacity of audience.

Reinforcement:

Few people can learn what is new in a single period. Repetition at intervals is extremely useful as it assists understanding. Every health campaign needs reinforcement, we may call it a “booster dose”.

Motivation:

In every person, there is a fundamental desire to learn. Awakening this desire is called motivation. There are two types of motives, primary and secondary.

a) Primary motives (e.g., hunger, survival) are inborn desires

b) Secondary motives are created by outside forces or incentives, e.g., praise, love, rivalry, reward, punishment and recognition

c) . In health education, motivation is an important factor.

Incentives may be positive or negative. To tell an overweight lady to reduce her weight because she might develop cardiovascular disease or it might reduce her life span may have little effect. But to tell her that by reducing weight she might look more presentable and beautiful; she might accept health advice. When a father promises his child a reward for getting up early, he is motivating the child to inculcate a good habit.

Learning by doing:

Learning is an action process, not a “memorizing” one in the narrow sense. The Chinese proverb “If I hear, I forget; if I see, I remember; if I do, I know” illustrates the importance of learning by doing.

Soil, seed and sower:

The people are the soil; the health facts the seed; and the transmitting media the sower. Having prior knowledge of people’s customs, habits, taboos, beliefs, health needs is essential for successful health education. Health facts must be truthful and based on scientific knowledge; the transmitting media must be attractive, palatable and acceptable. The message will not have the desired effect unless these three elements are carefully and satisfactorily interrelated.

Good human relations:

Studies have shown that friendliness and good personal qualities of health educator are more important than his technical importance in learning. Health educator must be kind and empathetic and people must accept him as their real friend.

Following the Leaders:

Psychologists have established the fact that we learn best from people whom we respect and regard. In health education, we try to penetrate the community through local leaders, village headmen, schoolteachers or political workers. Leaders are agents of change and if they are convinced first, the rest of task of implementing the program becomes easy.

ROLE OF FWW

Health education is one of the most important duties of FWW because you have direct contact with people at local level and are trusted by the people who come to seek advice from you, not only on health problems but also on social aspects of their life.

Role of FWW in health education is to:

1) Identify health problems requiring health education
2) Identify health related practices of people which contribute to the problems
3) Analyze the contributing factors and behaviours that need to be changed
4) Design and test messages of health education
5) Select who is to be taught, what, where, when and how
6) Prepare health education program
7) Carry out health education program
8) Keep record of health education activities
9) Display health education work on graphs and charts
10) Prepare reports
11) Evaluate progress of health education work.

14.3 APPROACHES IN HEALTH EDUCATION

14.3 APPROACHES IN HEALTH EDUCATION

1) Regulatory Approach(Managed Prevention)
2) Service Approach
3) Educational Approach
4) Primary health care Approach

1 REGULATORY APPROACH (MANAGED PREVENTION)

There are three levels of prevention:

Primary Prevention:

Health education enables people to value their health, and to know about diseases and how to make the best use of the organized health services, such as MCH clinics. It can motivate them to practice hygienic personal habits and healthy behaviour for themselves like using safe water, mosquito nets and child spacing. It can encourage people to care for their own environment, such as water supplies and excreta disposal. Health education can also help medical workers understand what the people want and by working together they can develop a healthier life.

Secondary Prevention:

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Tertiary Prevention:

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2 SERVICE APPROACH

Intends to provide all the health facilities needed by the people at their doorsteps on the assumption that people would use them to improve their own health.

- Limitation: It is not based on the felt-needs of people

Very often when a free service is introduced, people do not avail it. This serves to illustrate that we may provide free service to the people, but there is no guarantee that the service will be used by them.

3 EDUCATIONAL APPROACH

Most effective

Gives autonomy towards their own lives
Components: 1. motivation 2. communication 3. decision making
The results are slow, but permanent and enduring.

Sufficient time for an individual to bring about changes and learning new facts as well as unlearning wrong information as well.

4 PRIMARY HEALTH CARE APPROACH

Radically new approach starting from the people with their full participation and active involvement in the planning and delivery of health services based on principals of art health care via community involvement and inter- sectoral coordination

Individuals helped to become self-reliant in matters of health

PROMOTING NUTRITION IN CHILDREN:

A healthy and well-balanced diet is essential for good health. When there is not enough food, or if the diet does not contain the right balance of foodstuffs, people become more prone to illness and may become undernourished or malnourished. Children, in particular, are vulnerable to poor nutrition. Undernourishment and malnourishment can lower their resistance and make them more likely to suffer from infectious diseases.

Often, children will eat only small amounts of food if it is spicy, even if it is nutritious, and it is important to make children's food less spicy than adult food. Also, because their stomachs are small, children can eat only small portions and need to be fed more frequently than healthy adults.

It is also important that children are fed not just foods high in starch or carbohydrate (for instance rice). Although these foods can quickly make a child feel full, he or she may become malnourished if other key foodstuffs are not eaten. A well-balanced diet usually has a mixture of food with protein (for example beans, peas, meat, fish or eggs), carbohydrates (such as maize, potatoes, rice and many other staple foods), vitamins (such as vegetables, fish, fruits or milk), and some fats or oils (such as cooking oil). Sometimes not all these foods are available, and it is important that community members ask health workers how to make best use of available foods for a balanced diet.

In many situations, nutrition can be improved by changing agricultural or gardening practices. Often, even small plots of land can provide nutritious food provided that the right crops are grown. Health workers or agricultural extension workers can be asked for advice about which crops to grow to provide community members with well-balanced diets.

SELECTED TASKS WHERE HEALTH EDUCATION IS REQUIRED

TASKS	TARGET	HEALTH EDUCATION
MCH	Advise pregnant women and girls for	Antenatal, natal & postnatal care Nutrition for pregnant and lactating women High risk pregnancies Breast feeding Weaning foods
Immunization	Educate parents on:	Benefits of Immunization Schedule of Immunization Immunizable diseases Doses of Immunization Side effects etc.
Diarrhoea Control	Counsel mothers on:	Diarrhoeal Disease Danger Signs Control of diarrhoea through ORT Need to continue feeding Personal & environmental hygiene Disposal of domestic refuse
Treatment of Minor Aliments	Advise target audience on: Prevention and Control of minor ailments	Prevention of worm infestation-explain how, where and why worms spread Prevention of skin infections Control of dysentery through personal hygiene & hygienic measures in preparation of diet
Care of Emergencies & Referrals	Conduct classes for health care staff on:	First aid in case of emergencies / accidents Continuous use of CPR on way to hospital Artificial resuscitation How to avoid accidents & fire

		Plan for immediate referral Keep record of vital signs Maintain I/V line
Water Sanitation	Inform & Educate communities on:	Sources of Water supply Ways to make drinking water clean & safe Water borne diseases
Food Hygiene	Advise community on:	Proper storage, cooking and serving of food
Proper Toilet use	Discuss with the community:	Dangers of using open field defecation Advantages of having toilets and their use Control and prevention of diseases through proper use of toilets
Nutrition Program	Provide information to community on:	Balanced diet and its benefits Food requirements of vulnerable groups Causes of malnutrition World Food Program
Control of Communicable Diseases	Disseminate information to the community on:	Symptoms, mode of spread and measures to control communicable diseases.
School Health Education		Benefits of school health program Ensuring personal hygiene Organizing school health committee Arranging cleanliness competition Debates on health issues Essay and posters competitions Addressing morning school assemblies and tutorials Improving school water supply and toilet sanitation

Sanitation and health

Sanitation is defined by WHO as" the provision of facilities and services for the safe disposal of human urine and feces." It refers to the process of maintaining cleanliness and dealing with sewage. An example of sanitation is the city department that makes sure trash is disposed of properly.

Sanitation differs from hygiene in that it provides the means for people to be hygienic. Sanitation is important for all, helping to maintain health and increase life-spans. Poor sanitation is when people who live in a particular setting don't have access to safe water, good sewage system and live in a dirty environment.

Sustainable Development Goal target 6.2 calls for adequate and equitable sanitation for all. The target is tracked with the indicator of "safely managed sanitation services" – use of an improved type of sanitation facility that is not shared with other households and from which the excreta produced are either safely treated in situ or transported and treated off-site.

Some 827 000 people in low- and middle-income countries die as a result of inadequate water, sanitation, and hygiene each year, representing 60% of total diarrhoeal deaths. Poor sanitation is believed to be the main cause in some 432 000 of these deaths.

Diarrhoea remains a major killer but is largely preventable. Better water, sanitation, and hygiene could prevent the deaths of 297 000 children aged under 5 years each year.Open defecation perpetuates a vicious cycle of disease and poverty. The countries where open defection is most widespread have the highest number of deaths of children aged under 5 years as well as the highest levels of malnutrition and poverty, and big disparities of wealth.

Benefits of improving sanitation

Benefits of improved sanitation extend well beyond reducing the risk of diarrhoea. These include:

- reducing the spread of intestinal worms, schistosomiasis and trachoma, which are neglected tropical diseases that cause suffering for millions
- reducing the severity and impact of malnutrition
- promoting dignity and boosting safety, particularly among women and girls
- promoting school attendance: girls' school attendance is particularly boosted by the provision of separate sanitary facilities and
- potential recovery of water, renewable energy and nutrients from faecal waste.

Water, sanitation, and hygiene (WASH)

Safe drinking-water, sanitation and hygiene are crucial to human health and well-being. Safe WASH is not only a prerequisite to health, but contributes to livelihoods, school attendance and dignity and helps to create resilient communities living in healthy environments.

Drinking unsafe water impairs health through illnesses such as diarrhoea, and untreated excreta contaminates groundwaters and surface waters used for drinking-water, irrigation,

bathing, and household purposes. Chemical contamination of water continues to pose a health burden, whether natural in origin such as arsenic and fluoride, or anthropogenic such as nitrate.

Safe and sufficient WASH plays a key role in preventing numerous NTDs such as trachoma, soil-transmitted helminths and schistosomiasis. Diarrhoeal deaths because of inadequate WASH were reduced by half during the Millennium Development Goal (MDG) period (1990–2015), with the significant progress on water and sanitation provision playing a key role.

Evidence suggests that improving service levels towards safely managed drinking-water or sanitation such as regulated piped water or connections to sewers with wastewater treatment can dramatically improve health by reducing diarrhoeal disease deaths.

Water Supply and Sanitation

Toilet facilities:

Toilet should be attached to the bedroom when underground drainage is available. Without a water carriage system, toilet should be built towards one corner, away from the house.

Drainage for rain and slop water: Every house should have arrangements for draining rain water through rain pipes through a gully trap into the sewerage system; otherwise, the slop water should be allowed to flow in a soakage pit.

Refuse disposal:

Garbage should be collected in closed containers to avoid fly breeding and emptied regularly for final disposal.

Wholesome water:

In the absence of filtered water, the wells should be properly disinfected and kept clean or a hand pump can be installed. Water supplied by tankers should be purified before use.

Open space:

A space of less than 10 feet at the back and sides is not recommended as it prevents cross ventilation.

ENVIRONMENTAL HYGIENE

The environment is the collective term used to describe all the living and non-living things that make up our surroundings. This includes the physical, biological, cultural and social, economic and political environment. The physical environment consists of air, water, climate, and other physical conditions. The biological environment includes all the living things (the plants, animals and micro-organisms). The social and political environment is man- made consisting of the family, village, culture, beliefs, politics and the government.

HOUSING

In developing countries, a major portion of death and diseases like ARI (Acute Respiratory

Tract Infections) and diarrhoea are mainly due to poor household environment. Because of rapid urbanization, both high rise apartment buildings and shanty towns (katchi abadis) dominate the landscape of our cities. Due to the effect of housing on health, four main considerations are highlighted here.

Quality of Housing

The traditional design of a village house, built by the people themselves, from local material, is usually well suited to the needs of the inhabitants and the local environment even if it falls short of the modern hygiene standards. For an improved housing in a community, the following points should be kept in mind:

Site:

Conditions like dryness, warmth, sufficiency of air and light are looked into when selecting a suitable site for building a house.

Building:

A house should be built according to some standard guidelines.

The Foundation of the house must be solid enough to distribute the weight of the building over a large area. The walls should be broad and built on a bed of concrete. A layer of impervious material should be laid horizontally along the entire thickness of the wall; above the point where the wall leaves the earth but below the level of the floor. This layer is known as the Damp proof Course.

The Walls are made of bricks, stones, wood and cement. The thickness of wall should be such that the house is not warm in summers or cold in winters. The Roof could either be flat or sloping. Flat roof should have arrangements to allow rainwater to flow away. The height of the ceiling should be at least 10 feet.

Every room should have enough windows for cross ventilation and face the direction of prevailing winds. Doors should open outward to minimize entry of insects. The Kitchen should have a proper outlet for the smoke and a washable floor.

In rural areas, animals like cows, buffaloes and goats are kept as a common practice, but the cattle should be in a separate room away from the house. Cow dung is commonly used as a fuel as hand-made cakes fixed to the wall for drying. Overcrowding and inadequate ventilation causes a rise in temperature, humidity and permits air stagnation of the room resulting in discomfort of the occupants. Apart from the risk of respiratory diseases through droplet infection, there is lack of sufficient privacy to the occupants of the house.

Indoor Air Quality

Rural houses in developing countries rely on unprocessed biomass fuels, in the form of wood, cow dung and crop residue. They are burnt indoors in open fires resulting in high levels of air pollution, to which women during cooking and their young children are more heavily exposed.

(Particulates- a mixture of solid particles and liquid droplets found in air)

Microbes-

Bacteria, protozoa and fungi/moulds which rely on humid and moist environment for their growth and survival

Gases and Odour-

Indoor gases are released from furniture, cabinet, carpets, cleaning chemicals, insulation, pesticides etc.

Immediate External Environment

People in developing countries live without adequate shelter with no access to adequate sanitation and safe drinking water. Garbage collection is often non -existent and drainage tends to be poor, creating ideal conditions for insects and other disease vectors. Urban slums located near major roads, factories or dumpsites and burning of biomass fuel expose residents to higher levels of air pollution in addition to risk of industrial accidents.

Hence, Housing affects health in a number of ways. A combination of dampness, lack of light, poor ventilation, overcrowding contributes to spread of air borne droplet infection. Earthen floors and walls and unscreened windows permit the entry and breeding of bedbugs and mosquitoes. Cooking fires on the floor are hazardous to small children. Inadequate space to talk and play, especially in town houses, may encourage fathers and children to leave home, so adding to social problems.

Exponential rise in population

This is a very important factor in resource restricted countries like ours. The more the number of people the more resources are needed to fullfill their everyday needs. We cannot possibly provide all facilities to our people if our population continues to grow at the current rate. Family planning is a definite and reliable way to reduce the discrepancy between needs and supplies

Urbanization and Environment:

Millions of human beings will be added to the urban population of Pakistan over the next five years by the villagers quitting their homes in search of livelihood. Studies of the slum dwellers of Pakistan show that they are more vulnerable to diseases than the rural populace they have left behind and the older residents of towns.

14.4 DIFFERENT STRATEGIES FOR HEALTH EDUCATION

14.4 DIFFERENT STRATEGIES FOR HEALTH EDUCATION

All health education agencies should incorporate the following activities in their educational programs:

Maternal and Child Health:

Baby friendly, well baby clinics and antenatal sections are good places for health education. The various aspect of pregnancy such as diet, clothing, physiology of pregnancy, family planning, exercise, rest, feeding of baby, accident prevention, the role of the father, home economics, immunizations, psychology of children etc., are the subjects which can be discussed with advantage in M.C.H. Centers. The bringing up of the child will reflect the habits and attitudes of individuals at school, at work and in old age.

Health Education in Schools:

The school is the next place where health education could be given with ease. During this elastic period of life, the child can be moulded and guided to regulate his habits. Here, the child willingly accepts the learning as a natural duty and at this age he is more receptive if the teacher is skilled in handling the subject.

Health Education of Adults:

The idea of adult health education is to draw their attention towards specific health matters. Advice and guidance are given in clear, simple words to address the existing risks and describe procedures that they should adopt. Male members of families get together in the mosques five times a day or at least once a week for Friday prayers. The “Imam” (who leads the prayer) can be trained and entrusted the job of Health Educator on selected topics, which may be incorporated in his sermon. Male members listening to the sermon can be expected to impart knowledge to their women folk and children.

Health Education for the Sick:

It is during sickness that people are most interested in health. Opportunity exists for a systematic educational work in cases of malaria, tuberculosis, worm infestation and diabetes etc. Orthopaedic, Gynaecological, Paediatric and other hospital units could also be utilized during and after care sessions for educating the patients and their visitors.

Performance Guide for Group Health Education during Antenatal Care **Task/Activity**		**Rating**				
		0	**1**	**2**	**3**	**N/A**
	Principles of Good Health Education					
1.	Raises voice so that all can hear					

2.	Shows enthusiasm about the topics					
3.	Maintains eye contact with the listeners					
4.	Uses audio-visuals effectively					
	Introduction					
5.	Greets listeners and introduces herself /himself					
6.	Creates a comfortable atmosphere					
7.	Explains the purpose of health education during pregnancy					
	Health Education					
8.	Asks general questions about the group's knowledge about pregnancy and antenatal care					
9.	Discusses the various aspects of antenatal care and the complications which may occur. Chooses one topic per session. Provides information on:					
10	a) Preparation for birth (birth preparedness)					
11	b) Preparation in case of complications (complication readiness)					
12	c) Process of pregnancy and labour					
13	d) Routine examination during pregnancy					
14	e) Helpful traditional practices that should be encouraged					
15	f) Danger of self-medication in pregnancy					
16	g) Nutrition					

17	h) Taking iron tablets					
18	i) Prophylaxis for malaria					
19	j) Tetanus vaccination					

14.5 PERSONAL HYGIENE

14.5 PERSONAL HYGIENE

Hygiene is the study and observance of health rules for a healthy living. The FWW should possess knowledge and skills about personal hygiene, environmental hygiene, behavioural change and basics of communication**.**

Personal hygiene

It s defined as the branch of health which concerns the individual's adjustment to the physiological needs of the body and mind for the attainment of the maximum level of health.

Personal hygiene involves those practices that promote mental, emotional and physical health, as well as the social well-being of the individual. Its rules are critical to the maintenance of personal and public health.

Good personal hygiene is one of the best ways to protect yourself from getting illnesses such as gastroenteritis and the common cold. Washing your hands with soap removes germs that can make you ill. Maintaining good personal hygiene will also help prevent you from spreading diseases to other people.

What is personal hygiene?

Personal hygiene includes:

- cleaning your body every day
- washing your hands with soap after going to the toilet
- brushing your teeth twice a day
- covering your mouth and nose with a tissue (or your sleeve) when sneezing or coughing
- washing your hands after handling pets and other animals

Why is personal hygiene important?

Good hygiene is vital because it helps prevent you and your children from getting or spreading germs and infectious diseases. The germs that cause many diseases can be passed on through touching other people, getting faeces on your hands, handling contaminated food and coming into contact with dirty surfaces or objects.

Conditions that you can develop if you have poor personal hygiene include:

- diarrhoea, especially gastroenteritis
- respiratory infections, including colds and flu
- staph infections
- worm-related conditions, such as threadworms
- scabies
- trachoma, an eye infection which can lead to blindness

- tinea or athlete's foot
- tooth decay

Good personal hygiene involves keeping all parts of the external body clean and healthy. It is important for maintaining both physical and mental health. In people with poor personal hygiene, the body provides an ideal environment for germs to grow, leaving it vulnerable to infection. On a social level, people may avoid a person with poor personal hygiene, which may result in isolation and loneliness.

Types of personal hygiene

There are many types of personal hygiene.
The following list is a good starting point for someone looking to build a personal hygiene routine:
Dental Oral hygiene / cleanliness of mouth and teeth:

Dental hygiene

For a healthy mouth and smile, brushing the teeth for 2 minutes at least twice a day is recommended, once before breakfast and once before bed.

People should brush teeth regularly and replace the toothbrush every 3–4 months. Dental hygiene involves more than just having white teeth. A good dental hygiene routine can help prevent issues such as gum disease and cavities. It can also prevent bad breath.

Healthy mouth can control the germs but if attention is not given towards the cleanliness of mouth and teeth, then the mucous membrane becomes unhealthy, teeth are affected and become the centre of infection.

The importance of oral hygiene starts from the time when the child has not been born therefore more attention is given to the mother's diet during pregnancy. Vitamin A & D and calcium should be included in her diet in the form of eggs, milk, butter, vegetables and fruits. The baby should be given vitamin C and orange juice during infancy even if he is breast fed since this vitamin is not present in milk.

Following recommendations are made for good oral hygiene:

1) Proper dental care, oral hygiene and balanced diet for the expectant mother
2) Breast feeding for infant
3) Avoidance of thumb sucking and use of soothers in children and mouth breathing which tend to narrow the dental arch and deform the jaws
4) A diet adequate in Calcium, Potassium, Vit. A, C and D for the child
5) Daily use of fibrous foods such as apples, raw cabbage, and carrots
6) Brushing the teeth at least twice a day i.e., once in the morning & then before going to bed
7) Rinsing the mouth regularly after meals / eating anything.

Body

After washing put on clean, dry clothing. Wash sweaty or dirty garments well and, if possible, hang them outdoors to dry. It is advisable to shower or bathe daily, using soap and water to rinse away dead skin cells, oil, and bacteria. People can pay special attention to areas that accumulate more sweat, such as the armpits, in between the toes, and the groin area. They should also wash their hair with shampoo at least once a week, or more if necessary. Applying deodorant when fully dry can help prevent body odors.

There are several million sweat glands cover the human body. When bacteria break down sweat, the process creates a smell or body odor. Washing the body will help prevent skin irritation, as well as removing the bacteria that cause the body odour. Washing the hair removes oil and keeps a person looking clean and fresh.

Bathing:

Bathing Regular

bathing and laundering are important for cleanliness and good personal appearance. They also prevent hygiene-related diseases such as scabies, ringworm, trachoma, conjunctivitis, and louse-borne typhus. Educational and promotional activities can encourage bathing and laundering but increasing the number of washing facilities and locating them conveniently may be more effective. Bathing with soap is an important means of preventing the transmission of trachoma—an illness that can cause blindness and other eyesight problems. Children's faces should be washed regularly and thoroughly. If a child has trachoma, a special towel or tissue should be used to wipe or dry the child's face; the towel should never be used for other children because of the risk of transmitting the disease. Ideally, programmes that promote bathing should be combined with a programme to reduce the numbers of flies, which spread trachoma and other diseases.

Laundering

To promote laundering of clothes and bedding, laundry slabs or sinks can be constructed near water points. They should be large enough to wash bedding and other bulky items and be situated so that water drains away from the laundry area and away from the water source. Locating laundry places in natural water bodies, streams and irrigation canals is best avoided, if possible, since this practice can contribute to the transmission of schistosomiasis.

Hand washing

No other part of the body comes so frequently in contact with infectious organisms than hands Regular hand washing is one of the best ways to avoid spreading communicable diseases. To avoid getting sick, wash your hands properly.

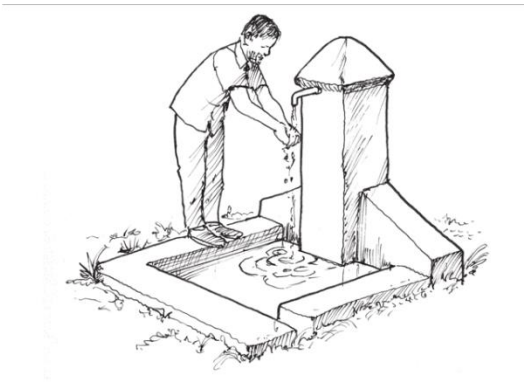
- Wet your hands, then wash with soap or with an alcohol-based hand sanitizer for at least 20 seconds.
- Lather between the fingers and the back of your hands.
- Scrub the hands for at least 20 seconds, which a person can time by humming the "Happy Birthday" song twice

- Clean grubby nails with a scrubbing brush, if one is available.
- Rinse both sides of your hands, preferably under clean running water.
- Dry off your hands with a clean towel or let them dry in the air.

Hand washing is recommended for everyone at certain times:

It is especially important to wash your hands after going to the toilet because faeces, which you might come into contact with, contains billions of germs. Also, wash your hands

- before, during, and after preparing food
- before eating food
- before and after looking after anyone who is vomiting or has diarrhoea
- before and after treating a cut or wound
- after going to the bathroom
- after changing diapers or cleaning up a child who has used the toilet
- after blowing the nose, coughing, or sneezing
- after touching garbage or dirty surfaces or objects
- Handling eggs, raw meat, poultry or seafood
- Using public transport
- after handling pets or pet-related items, such as food



Handwashing at a standpost

Handwashing using a tap

For health professionals

Before

Physical examination of patient, taking out or inserting contact lens
Picking up a baby, setting the table, handling ready-to-eat food

Especially After

Touching blood or body fluids
Cleaning up spills
Using the toilet
Sneezing, coughing, or blowing nose

Before and after

Treating cuts or wounds
Working with young children

HOW TO MAINTAIN GOOD PERSONAL HYGIENE

Knowing how to maintain good personal hygiene can make it easier to build a routine. A person should have some basic knowledge of the following types of hygiene:

Menstrual and genital hygiene

People with an uncircumcised penis can clean it by gently pulling back the foreskin and washing underneath it with warm water or soap.

Washing your genitals

Men who are uncircumcised can clean their penis by gently pulling back the foreskin and washing underneath it with warm water or soap.

For girls and women, is important to change sanitary products regularly and to wash the hands before and after changing tampons, pads, or any other sanitary products.

Women can gently wash the delicate skin around the vulva with a soap-free wash, salt water or plain water. Avoid perfumed soap and bath products since these may irritate the sensitive skin of the vulva.

As vaginas are self-cleaning, using soap to clean the vagina can cause an imbalance of its natural bacteria and lead to infections. Do not douche, because it upsets the healthy good bacteria in your vagina.

During menstruation, wash your vulva as usual. Tampons can be changed every 3 to 4 hours. To avoid toxic shock syndrome, do not leave a tampon in for more than 8 hours. Change sanitary pads several times a day. Wash your hands before and after changing tampons or pads.

Clothing should be:

1) Porous/ cotton: porous clothing is better both in winter and summer because it retains

air in its pores which being a bad conductor of heat insulates the body against excessive heat and cold.

2) Non-conductor of heat: Colors like white or light blue are good for summer while darker colors absorb more heat and are preferable for winter
3) Tight clothing hinders body movements
4) Provide equal distribution of warmth and weight
5) Allow sunlight and fresh air penetration in moderation as this would be stimulating
6) Permit evaporation of sweat from the body and thus not hinder cooling mechanism
7) Non-irritant, smooth and soft
8) Always clean specially the under-garments (vests and under wears) should be washed / changed at least twice a week.

CARE OF THE FACE:

The thorough cleansing of the face at night to remove the accumulation of dirt from the day's exposure is the first requirement in its care. Warm water and a pure soap, free from alkali are the best cleansing agents. Cosmetics are not regarded as a hygienic necessity. Cosmetics sometimes contain injurious substances and cause skin rash.

CARE OF HAIR:

The scalp should be brushed not the hair so much. The brush acts as a massage to the scalp and it increases the blood-supply of hair follicles, this increased blood is felt as the flow which follows a satisfactory brushing. Hair on other parts of the human body should be kept trimmed or shaved off, regularly according to the prevalent customs and belief.

The hair should be washed at least once a week and also combed or brushed daily / regularly. If there are lice in the hair, plenty of oil should be applied to the scalp and the hair is combed several times with a fine comb. After washing the hair, it should be combed again. Anti-lice shampoos and anti-lice sprays are available in the market, which eradicate lice. D.D.T should not be used, because it is a poison and after being absorbed in the scalp it can cause poisoning and harm the eyesight.

Preventing bad breath

Bad breath can be caused by poor oral hygiene. Brush and floss your teeth twice a day since this reduces gum disease and the chances of future tooth decay. Use these dental care tips and make an appointment with a dentist for a check-up if you have further symptoms.

Nails

Fingernails may harbor dirt and germs, contributing to the spread of bacteria. It is easier for dirt and germs to collect under longer nails, so keeping them short can help reduce the risk of spreading infections.

Care of Nails:

The nail should be filed and kept short so that they do not interfere with the usefulness of the fingers or harbour bacteria, protozoal cysts or parasitic ova. Using sanitized tools to trim the nails and keep them short is one of the best ways to ensure that no dirt can collect underneath them. Scrubbing the underside of the nails with a nail brush can form part of a person's hand washing routine

CARE OF EYES:

Periodic eye examinations are particularly indicated before the age of twenty and after the age of forty, because the more serious eye difficulties are encountered at these stages. The best care of the eyes involves the cultivation of good general and ocular habits. Good general habits include adequate sleep, sufficient outdoor exercise, balanced diet, proper relaxation, avoidance of tobacco and alcohol and washing the eyes regularly with clean and cool water. Good ocular habits include proper reading posture, reading in proper light and keeping the book at ten inches from the eyes.

CARE OF EARS:

Early treatment of infected tonsils, correction of nasal obstruction and prompt medical care when an earache occurs are important preventive measures. It is advisable to use ear plugs when swimming. Foreign objects should never be introduced because of the danger of injuring the eardrum.

Care of Nose:

It is not only a sense organ for smell but it is also an air conditioner and air filter. Nasal hygiene should be made a part of the daily toilet as is tooth brushing. Nose-washing with water every evening and morning and especially after any dusty episode is useful.

Care of Feet:

Wash the feet regularly. Always dry the skin folds between the toes and always cut the toenails straight to avoid in growing nails. The shoes should be of the right size and shape. The size should be such that permits a slight movement of the toes and a little sliding action of whole foot inside the shoes. If the ground is smooth lighter shoes with thinner soles are better, but for rough ground heavier sole is better.

The Care of the Bowels:

Constipation is a common symptom and is defined as a 'change in the routine bowel habit or defecatory behaviour'. The prevalence of constipation increases in persons older than 65 years. This possibly is the result of decrease in muscle tone and exercise or use of medication.

1) There is no right number of daily or weekly bowel movements
2) Sedentary habits and want of proper exercise lead to weakening of both the intestinal and abdominal muscles resulting in stasis of the intestinal contents

3) Modern food contains less indigestible material which mechanically stimulates the peristalsis. Relief can be obtained by increase of fibre in diet and adequate hydration

4) The old people need less food than in earlier years because they are not nearly as active as in middle life and the metabolism is lower. Thus, moderation in eating is of great importance for the old.

FACTORS INFLUENCING PERSONAL HYGIENE

Habit:

Habit plays an important part in the preservation of health. It is readily formed, grows by practice, and eventually becomes a part and parcel of nature; therefore, it is called second nature.

Sleep:

Sleep is thought as a passive, dormant part of our daily lives but actually our brains are very active during sleep. Sleep affects our daily functioning, physical and mental health in many ways.

The amount of sleep each person needs depends on many factors, including age, state of health and occupation. Infants generally require about 16 hours of sleep a day, while teenagers need about nine hours on average. For most adults, seven to eight hours sleep at night is the best amount of sleep, although some people may need as few as five hours or as many as ten hours of sleep each day. Women in the first three months of pregnancy often need several more hours of sleep than usual. The amount of sleep a person needs also increases if he or she has been deprived of sleep on previous days. Getting too little sleep creates a ‘sleep debt’, which effects judgement, reaction time and other important functions.

People tend to sleep more lightly and for shorter time spans as they get older. About half of all people over 65, have frequent sleeping problems, such as insomnia, and deep sleep stages in many elderly people often become very short or stop completely. This change may be a normal part of aging or may result from medical problems that are common in elderly people or from medications and other treatments for those problems.

Useful tips:

Set a schedule:

Going to bed at a set time each night and getting up at the same time each morning. Disrupting this schedule may lead to insomnia.

Exercise:

Daily exercise for 20-30 minutes often helps people sleep well.

Avoid caffeine, nicotine and alcohol: which act as a stimulant and keep people awake. Sources of caffeine include coffee, chocolate, soft drinks, non-herbal teas, diet drugs and some pain relievers. Smokers tend to sleep very lightly and often wake up in the early morning due to nicotine withdrawal. Alcohol robs people of deep sleep and keeps them in the lighter

stages of sleep.

Relax before going to bed:

A warm bath, reading, or another relaxing routine should be a part of a person's bed-time ritual, as they can make it easier to fall asleep.

Sleep until sunlight: Sunlight helps the body's internal biological clock reset itself each day.

Don't lie in bed awake:

If one can't get to sleep, he/she should not just lie in bed but do something else like reading or watching television until he/she feels tired. The anxiety of being unable to fall asleep can actually contribute to insomnia.

Control of room temperature:

Extreme temperature cold or hot may disrupt sleep or prevent a person from falling asleep.

Eating and Drinking:

A regular habit about eating and drinking is essential for the preservation of health. Food, which must always be wholesome, should be properly masticated and eaten slowly. It is a bad habit to overeat.

1) Always wait for a true appetite
2) Select and eat food which is palatable
3) Masticate well so that saliva mixes with the food and helps in digesting carbohydrates
4) Do not hastily swallow a mouthful, but let it be swallowed by itself
5) Avoid serious reading or serious discussions during meals
6) Regularity of time at meals is advantageous
7) Avoid drinking excessive water during meals.

Fasting:

It is abstinence from all kinds of food during the day. It causes no inconvenience except a desire for food at the usual mealtimes, which however disappears soon.

Health Benefits of Fasting

1) It initiates weight loss. Most people are surprised at how little desire for food they have while fasting.
2) It mobilizes and eliminates stored toxins.
3) It gives rest to the digestive system. After fasting, both digestion and elimination are invigorated.
4) It resolves the inflammatory processes, such as in rheumatoid arthritis.

5) It decreases allergic reactions, including asthma and hay fever.

6) It promotes the drying up of abnormal fluid accumulations, such as oedema in the ankles and legs and swelling in the abdomen.

7) It corrects high blood pressure without drugs if the person follows a health-supporting diet and lifestyle.

8) It helps to overcome bad habits and addictions. Many people have overcome tobacco and alcohol addictions by fasting, and even drug addictions.

9) It clears the skin and whitens the eyes.

10) It restores taste appreciation for wholesome natural foods.

11) It is the perfect gateway to a healthy diet.

Physical Constitution

Individual differences in constitution of the body exist in different persons. Some are strong and robust, while others are feeble and weak. Moreover, resistance to disease varies with the constitution. A man with a strong robust constitution should be able to resist the attacks of disease. A weak constitution denotes a condition of the body which is susceptible to disease and when attacked is less able to resist against infections.The physical constitution of a person is partly acquired and partly inherited, and a strong constitution may deteriorate under unhygienic conditions, while a delicate one may improve under hygienic ones.

Cleanliness:

Cleanliness about the food we eat, the air we breathe, and the water we drink, is essential for good health.

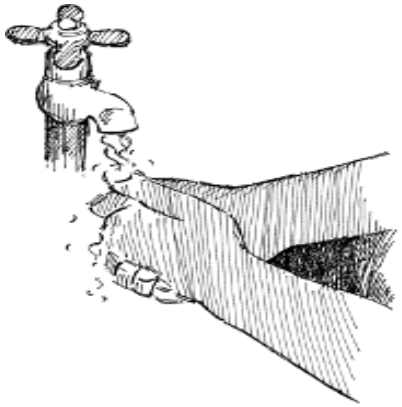
14.6 FOOD HYGIENE

14.6 FOOD HYGIENE

Contaminated food represents one of the greatest health risks to our population and is a leading cause of disease outbreaks and transmission. Food that is kept too long can go bad and contain toxic chemicals or pathogens. The foodstuffs that are eaten raw, such as fruits or vegetables, can become contaminated by dirty hands, unclean water or flies. Improperly prepared food can also cause chemical poisoning. To promote good health, therefore, food should be properly stored and prepared. Ways in which communities can prevent health risks from food are discussed in the following sections.

FOOD PREPARATION IN THE HOME

As most food is likely to be prepared in the home, it is important that families understand the principles of basic hygiene and know how to prepare food safely. Before preparing food, hands should be washed with soap Raw fruit and vegetables should not be eaten unless they are first peeled or washed with clean water. It is also important to cook food properly, particularly meat.



Cattle tapeworms that can be transferred to humans through improperly cooked meat; for this reason, raw meat should never be eaten. Eggs, too, must be cooked properly before eating, since they may contain salmonella, a virulent pathogen. The kitchen itself should be kept clean and waste food disposed of carefully to avoid attracting vermin, such as rats and mice, that may transmit disease. Keeping food preparation surfaces clean is critical, because harmful organisms can grow on these surfaces and contaminate food.

Fresh meat should be cooked and eaten on the same day, unless it can be stored in a refrigerator; if not, it should be thrown away. Cooked food should be eaten while it is still hot and should not be left to stand at room temperature for long periods of time, since this provides a good environment for pathogens to grow.

Food that is ready to eat should be covered to keep off flies and should be thrown away if not eaten within 12–16 hours. If food must be stored after cooking, it should be kept covered and in a cool place, such as a refrigerator. If a refrigerator is not available, food can be stored on ice blocks or in a preservative such as pickling vinegar or salt. Food that is already prepared, or food that is to be eaten raw, must not come into contact with raw meat as this may contain pathogens that can contaminate the other foods

EATING OUT:

Food is often bought and consumed at eating-houses (cafes or restaurants). If basic health and safety rules for storing, preparing and handling food are not followed in the eating-houses, these places will represent a health hazard for the customers and may cause serious disease outbreaks. The most important aspects of food hygiene in these establishments relate to sanitation, water supply and personal cleanliness

STORING FOOD PROPERLY

1) All restaurants should have clean water for washing and drinking, and separate sanitation facilities, away from the kitchen area, for customers, cooks and food-handlers.
2) The staff should have clean uniforms each day and have regular medical check-ups.
3) Food should be freshly prepared daily and any that is spilled or not used should be disposed of. The kitchens and eating areas must be kept clean and free of vermin and insects.
4) Eating-houses should also be well-ventilated, with adequate lighting, and have procedures for dealing with fires and accidents. For example, the eating area should not be too crowded, to allow customers easy exit in the event of a fire.

Food Authority exists in Pakistan and as a rule, all eateries require official approval before they can operate and are subject to regular checks. These checks are likely to be increased in times of epidemics. The community should recognize that eating-houses must be properly run and maintained to ensure that they do not become a source of disease.

Eating places should be periodically checked, for example by Food Inspectors, to make sure that the establishments do not pose health risks. If a community member suspects an eating-house of posing a health hazard, he/she should request an inspection by the appropriate local health authorities.

Street food-vendors

Street food-vendors are common in urban and periurban areas, but they also operate in rural areas, particularly if there is a market or community fair with bars and other drinking establishments. Although people enjoy food from these vendors, in many cases the food is of poor quality, and it represents a serious health risk.

In part, this is because the street vendors have little or no access to safe water supplies or sanitation facilities, and they commonly cook and handle food with dirty hands. Raw foodstuffs, too, cannot be kept in safe storage places and are easily contaminated by vermin and insects. Moreover, the street vendors often keep cooked food at ambient (environmental) temperatures for prolonged periods of time and may heat the food only slightly before serving. All these factors may make the food from street vendors dangerous.

PERSONAL, DOMESTIC AND COMMUNITY HYGIENE

Where street food-vendors are legal, they should be regulated by the health authorities. Often

they are not legal, however, in these cases steps should be taken to promote their safe management of food and, where necessary, to prevent them from selling their food. This may be difficult if the demand for street food is high, and it may be necessary to work closely with local health authorities. Street vendors should be encouraged to locate close to water points and sanitation facilities where they can keep hands and food clean. Community members can also work with vendors to ensure that food is prepared and eaten immediately, rather than being kept unrefrigerated for long periods.

14.7 WATER HYGIENE

14.7 WATER HYGIENE

Water hygiene focuses on natural and anthropogenic pollutants (from soil and through air precipitation, chemicals, waste, sewage) present in water, affecting human health.

Safe drinking-water, sanitation and hygiene are crucial to human health and well-being. Safe WASH is not only a prerequisite to health, but contributes to livelihoods, school attendance and dignity and helps to create resilient communities living in healthy environments.

Drinking unsafe water impairs health through illnesses such as diarrhoea, and untreated excreta contaminates groundwaters and surface waters used for drinking, irrigation, bathing and household purposes. Chemical contamination of water continues to pose a health burden, whether natural in origin such as arsenic and fluoride, or anthropogenic such as nitrate.

Safe and sufficient WASH plays a key role in preventing numerous diseases such as trachoma, soil-transmitted helminths and schistosomiasis.Evidence suggests that improving service levels towards safely managed drinking-water or sanitation such as regulated piped water or connections to sewers with wastewater treatment can dramatically improve health by reducing diarrhoeal disease deaths.

To encourage handwashing to become part of the daily routine, suitable facilities must be located near to places such as latrines and kitchens, where they will be needed. If running water is available, the facilities should include a tap and a sink as well as soap.

Hands may also be washed at a tap stand. If running water is not available, an oil can or bucket fitted with a tap is a simple way of providing handwashing facilities; the larger the container, the less frequently it will need filling. Some containers are mounted on stands with a ledge for soap.

A leaking container (such as a tin can with holes in its base) can also be used to scoop water from the water storage container and provide a stream of running water for handwashing. Another approach involves a suspended container that, when tipped, pours water onto the hands of the user. The system can easily be made from plastic cooking oil containers. Soap itself can be kept clean by suspending it above the ground on a string.

Classification of Water:

For practical purposes water is classified as under:

Potable water:

Water whose quality is such that it can be used for drinking purposes is known as potable water. Safe or wholesome drinking water is defined as one that is

1) Pleasant to taste
2) Free from harmful chemical substances
3) Free from pathogenic organisms
4) Usable for domestic purposes.

Clean water:

This is one which is free from contamination and safe for human consumption, as determined by laboratory analysis, sanitary survey and continued use.

Polluted water:

It is due to change in physical qualities through addition of substances causing turbidity, color, odour or taste.

Contaminated water:

One, which may carry infection due to the addition of human or animal waste, or which has been rendered unwholesome by hazardous chemical compounds.

SOURCES OF WATER

Rainwater:

Rainwater is nominally the purest form of water, as it is really “distilled water”. However, it receives impurities from the moment it condenses. The impurities collected by the rain before it reaches the surface of the earth are considerable, and some are positively harmful.

Surface Waters:

Surface waters include rivers, creeks and smaller streams, large and small lakes, ponds and man-made impounding reservoirs. Their composition is highly variable, depending upon the characteristic of the catchment basin. Surface waters are directly exposed to pollution by surface wash and water carried waste. Because of the large yield of surface sources most large cities depend on them for water.

Ground Water:

The portion of rainfall which percolates into the soil passes downwards through the underlying subsoil and rocks to various depths below the surface until it reaches a stratum which does not permit it to go further, called the impervious strata. Thus, above an impervious stratum is a stratum of soil which is saturated with water, and called the zone of saturation, water it holds is known as ground water and the upper surface of the water is known as the plane of saturation or water table. The natural outflow of subsurface or ground water at the earth’s surface is called a spring.

Wells

A vertical hole dug out or drilled into the ground to get subsurface or ground water is known as a well.

Types of Wells:

A shallow well taps water from above the upper strata. It generally dries up in summers and is likely to be contaminated due to surface washing close to the well. A deep well taps water from below the impervious layer. The quantity of water is large and uniform because there

are no fluctuations in the water level.

Keeping the community well water supply clean:

1) Dig wells at least 20 meters away from latrines.
2) Build a head wall around the well. Do not stand on the wall.
3) Put a cover on the wall.
4) Use only one container to draw water, this container should never touch the ground.
5) The person drawing water from the well should touch only the handle and outside of the bucket only.
6) Clean out the well during the dry season.
7) Always keep the well walls in good repair.
8) Chlorinate the water regularly if possible.
9) Make sure that all water spilt around the well drains away quickly and completely.
10) If there is a standpipe, make sure that the tap works properly, and does not drip.
11) Keep the area around the standpipe clean and make sure that water can drain away, if spilt.
12) Make sure that someone is responsible for looking after the well and standpipe, and that these are regularly maintained, and spare parts are available. The community could jointly pay a small wage for the work.

Sources of Water Contamination:

It is easier to prevent water from getting dirty than it is to clean it. It is, therefore, important to consider again all the possible sources of contamination between the time that water falls as rain and the time it is used. The common sources of water contamination are as under:

1) The collecting surfaces for rainwater may have leaves, insects, or bird and animal faeces on them.
2) When water runs over the earth it may become contaminated with human or animal excreta, refuse, fertilizers or industrial waste. This contamination is less high up on mountains and greater nearer towns.
3) Shallow wells may be contaminated by excreta and refuse being washed into them, especially if latrines are nearby.
4) Wells may also be contaminated by the use of dirty containers for drawing water, or by oil from a nearby pump.
5) Rivers, lakes or dams may be contaminated by bathing, urinating or defecating in the water.
6) Even piped water may become contaminated from leaks in the pipes, especially when these pass near foul water or dirty drains.
7) Water may go bad if it is stored for too long in a pot or cistern.

8) Water from any source may become contaminated if it is drunk from dirty or communal drinking vessels.

WATER AND HEALTH:

Water has many uses, most important is the use of water for drinking purposes and water is also used for recreational purposes.

Health risks associated with recreational water use are:

1) Accidents and physical hazards leading, for example, to drowning or injury
2) Water quality especially contamination by sewage
3) Exposure to heat and sunlight
4) Contamination of beach sand
5) Exposure to algae and their products and dangerous aquatic organisms
6) Chemical contamination.

Health risks associated with drinking water are:

- **Pathogens:** Bacteria, viruses, and protozoa that can cause disease
- **Carcinogens:** Chemicals that can cause cancer
- **Non-carcinogenic chemicals:** Chemicals that cause health problems other than cancer.

Classification of Water Related Diseases

Faeco-Oral Diseases:

These are all infections transmitted by the faeco–oral route. They may be water borne or water washed. Examples are the classical diarrhoeal diseases and the dysenteries including hepatitis A and ascariasis.

Water Borne Diseases:

These arise from the contamination of water by human or animal faeces or urine infected by pathogenic viruses or bacteria, which are directly transmitted when the water is drunk or used in the preparation of food. Cholera, hepatitis, and typhoid are the classic examples.

Water Washed Diseases:

Water washed diseases generally result from the lack of water for washing or personal hygiene. The state of remaining unwashed not only allows skin infections to develop unchecked but also makes it easier for intestinal infections to spread from one person to another on dirty fingers. Poverty, being common in tropical countries, means that many people cannot afford a good and constant water supply. Some diarrhoeal diseases and contagious skin and eye infections are prevalent e.g., trachoma, scabies and dysentery. Water washed diseases diminish wherever adequate supply of water is available and used.

Water Based Diseases:

There are some worm infestations in the tropics which are not spread passively from person to person in the water. The parasitic eggs or larvae which reach water are not directly infective to man, but are infective to specific invertebrate animals, chiefly snails and crustaceans. They undergo development within these intermediate hosts from which after a period of days or weeks, further larvae mature and may be shed into the water. These larvae are infective to man who becomes infected by drinking or contact with water.

Water provides the habitat for the intermediate host organisms, in which some parasites pass part of their life cycle. These parasites are later the cause of helminthic diseases in human as their infective larval forms in fresh water find their way back to humans by boring through wet skin e.g., schistomaisis.

Water Related Insect Vector Diseases:

Water may provide a habitat for water-related insect vector of disease. Mosquitoes breed in water and the adult mosquito may transmit malaria, filariasis, and virus infection such as dengue fever, yellow fever and Japanese encephalitis. The different types of mosquitoes vary in their preference for different water bodies and are specific in their requirement.

Water Dispersed Diseases:

These are assuming importance in the developed countries. Here the agents proliferate in fresh water and enter the human body, through the respiratory tract. Examples are the bacteria, legionella which proliferate in the water of air conditioning systems and cause pneumonia, freshwater amoebae which may lead to fatal meningitis.

PURIFICATION OF WATER

Public water supply is defined as the source which provides water to twenty-five or more families. Large scale water supplies are derived either from deep wells or surface water. Deep well water should usually be satisfactory, but surface waters are generally so contaminated that some form of purification is necessary to render them safe for domestic use.

Purification on Large Scale:

The methods of purification in common use are storage, coagulation, sedimentation, filtration and disinfection by chlorine or other chemical means. This treatment removes color, turbidity, micro-organisms, colloidal particles and some dissolved substances. It should be noted that the above mentioned ‘conventional methods’ do not remove dissolved synthetic organic chemicals, and are moderately effective in reducing or removing, heavy metals and radioactivity.

Storage:

Although it cannot be relied on as a sole measure of purification, it is valuable as a preliminary to other processes. Storage reduces the bacterial content of water and also reduces the amount of suspended matter in it. Storage beyond two weeks is not recommended due to the growth of algae in the reservoir. Excess algae growth can be controlled by using copper

sulphate.

Sedimentation:

Storage for several days will allow the heavier particles to settle out, but where storage capacity is limited or the water contains much finely suspended matter, sedimentation may be hastened by the addition of a chemical coagulant, usually aluminium sulphate (Alum) i.e., 35 mg/litre.

Filtration:

Filtration through sand is the oldest and most universally used method of purification. There are two main types of filters in common use:

1) apid sand or mechanical filters, using coarse sand
2) Slow sand or biological filters, using fine sand
3) Two or more kinds of filters may be used in series, such as rapid sand followed by slow sand.

Disinfection:

The final stage in the purification of water is disinfection, the elimination of pathogens, and the most widely used means is by chlorination. Chlorination is the method of choice for sterilization of water, both on a large scale and small, as it is the cheapest and most reliable method.

Purification on Medium Scale:

It involves purifying water for domestic and recreational use.

Water for domestic use:

This is needed when water is obtained from wells, springs and tanks. Disinfection is done by chlorination, usually by adding bleaching powder or chlorinated lime.

Water for Recreational Use:

Swimming pools are used frequently for swimming and other water sports. Water in the swimming pool has to be purified either by continuous method or the fill and empty method. The following diseases may be transmitted through swimming pools:

1) Skin diseases such as ringworm and scabies
2) Intestinal infections, though rarely
3) Others like conjunctivitis, otitis media and sinusitis.

Purification on Small Scale:

It includes boiling, distillation and purification by chemicals.

a) Boiling: This is a simple and effective method. Roll boiling for 5 – 10 minutes kills off

most microorganisms and removes temporary hardness.

b) Distillation: This method would get rid of all impurities however the water would be very soft, and insipid in taste. It is a very costly method.

c) Chemicals: Different chemicals are used for purifying water.

- Bleaching powder: It can be kept as a strong solution, small quantities of which are used for adding to water in the dose of 200 gm to one liter to make a 5% solution.
- Chlorine tablets: These are used for rapid action and one tablet is required for one liter of water. They are known as Halazone tablets.
- Iodine: Two drops of a 2% solution of iodine is sufficient to disinfect one liter of water.
- Potassium permanganate: It may be used by adding an amount just sufficient to give a pink coloration. It is effective against V. cholera.
- Alum: It should be used in all turbid water, adding 0.1 to 0.4 gm per 5 liter of water.

Domestic Filtration

In the context of our far-flung areas, domestic filtration and treatment assumes the utmost importance, as its proper implementation would result in adequate prevention against the common water related diseases. A large variety of measures can be taken, and they involve both physical and chemical methods.

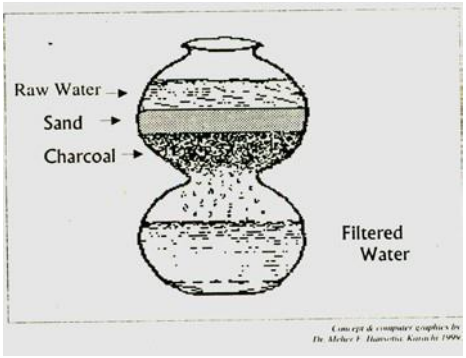
The Three pot treatment system:

Water which is to be utilized should be stored for a minimum period of two days providing sufficient time for suspended impurities to sediment and improvement in quality.

- Each day new water is brought into the house.
- Fresh water from the source of supply is collected in pot number1, preferably, straining it through a clean muslin cloth.
- Water in pot number 1 is slowly poured into pot 2, and empty pot 1 is washed out.
- Water in pot number 2 is slowly poured into pot number 3, and pot 2 is washed out.
- Pot no. 3 is the pot from which water is used for drinking purpose.

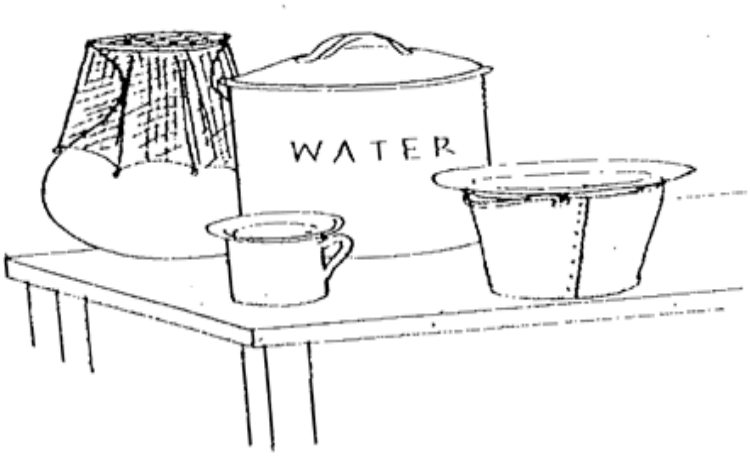
Two pot method:

In this, one earthen pitcher, with a perforated base filled with sand and charcoal respectively is filled with water, from the source and placed above an empty pitcher which receives the filtered water. Water becomes clean and its bacterial content is reduced to some extent, however chemical disinfection may be necessary.



Emergency Purification of Water:

Whenever drinking water is incriminated in epidemic emergencies, simultaneous domestic water disinfection and protection of the community water supply system are required. The simplest method of disinfecting drinking water is to bring it to a roll boil for 5 -15 minutes. Filtration at home is not reliable. Addition of bleaching powder is not satisfactory because it has a low content of chlorine produces an insoluble material and is unstable.



Keep all food and watwer covered

Keeping drinking water clean

1) Keep drinking water in a clean container, such as a bucket, in a clean place
2) The container should be placed a little higher than the ground, away from children and animals
3) Keep the container against a wall, away from windows and the cooking area
4) Always put a clean cover over the container even when it is empty
5) Make sure that the container has no leaks or cracks and that the lid completely covers the mouth of the container
6) Clean the cover every day with boiling water if possible
7) Rinse the bucket or other container for drinking water, inside and outside each time it is empty
8) Always use the same container, such as a mug to take water out of the bucket. Do not use this container for any other household purposes

9) Pour the water from this container into a clean cup (with clean hands) for drinking

10) Never put hands or fingers into the drinking water bucket

11) Do not put hands or fingers into the cup, hold it on the outside or by the handle if it has one

12) Keep the mug upside down on top of the cover.

14.8 CONTROL OF VECTORS IN THE VICINITY

14.8 CONTROL OF VECTORS IN THE VICINITY

These are insects and animals which spread disease. There are a number of insects and animals responsible for spreading some of the common diseases in rural areas. In addition to protecting water supplies and improving refuse and excreta disposal, food hygiene, and housing, it is useful to consider what can be done to control the vectors themselves.

Houseflies:

They breed and feed on decaying matter such as vegetable refuse, animal carcasses, and particularly on faeces. They carry the bacteria from this decaying matter on to human food, skin, and eyes when they land on them.

Flies associate with people simply for food. This food may be in the form of food scraps, discharges from eyes or sores, food around the mouths of children or even faeces on careless hands. The community should be told of the above fly habits before being asked to help to control them:

- All refuse, any decaying matter, carcasses and faecal matter must be properly composted to useful fertilizer.
- All house surroundings must be kept clean all the time
- All houses must be kept clean, all food leftovers etc. should be placed in covered dustbins or buried immediately
- All food vessels and utensils should be kept clean
- Foods should be protected from flies – food and meat safes are recommended for this purpose
- Village streets, roads and other public areas should be kept clean
- Animal-keeping areas like cattle domes should be away and separate from human settlements.

Mosquitoes:

They transmit Malaria which is the number one killer disease in many parts of the world. To let mosquitoes, breed around a house is asking for trouble. Mosquitoes are almost as dependent upon water as fish. So, the best way to control is by drying them to death that is by removing all possible water breeding sites. The nuisance and danger from mosquitoes can be reduced by:

- Draining water holes, ditches and any accumulation of water in or around the village
- Filling in holes, ditches etc. so that water will not accumulate
- Clearing bushes and grass along water banks and in the village as a whole
- Mosquitoes only breed in damp places and a long grass prevents these from drying out
- Collecting and disposing of all containers likely to hold water this includes tins, coconut husks, old motor car tyres, pots of plants, etc.

- Rooms should have windows screened with mosquito proof wire-gauze and beds should be provided with mosquito nets
- Use of mosquito repellent coils immediately prior to sleeping time is beneficial.
- Use of insecticide in hand sprays.

Fleas, bedbugs, lice and ticks:

All these are widespread sources of nuisance and ill health. They can be controlled by depriving them of sheltered places in which to breed such as unwashed clothing, the joints of roughly made bed frames, and cracks in mud walls and floors; and by reducing contact with animals. The use of soap, sunlight, and cement to eradicate these are more important than the use of DDT.

WASTE DISPOSAL

Sources of waste can be broadly classified into four types:
Industrial, Commercial, Domestic, and Agricultural.

1) Industrial Waste. These are the wastes created in factories and industries. ...
2) Commercial Waste. Commercial wastes are produced in schools, colleges, shops, and offices. ...
3) Domestic Waste. ...
4) Agricultural Waste

Household Refuse:

It includes all the waste material from the houses, which cannot be removed by drains. Household refuse includes kitchen refuse, paper, splintered glass, dry leaves, empty cans, bottles, paper bags and sometimes rejected linen. In villages it also includes cow dung, stable manure, leaves, garden refuse, waste fruit and vegetables, old glass, tins, ashes, paper, dead animals etc.

Garbage: It is the term used for kitchen refuse and consists of cooked but unused food, vegetable peelings as well as eggshells. By far the greater amount of household refuse is garbage.

Street Refuse:

It includes all the waste material from the shops and the streets.

Trade Refuse:

Means the refuse of any trade manufacture or business or any building material.

Decomposition of refuse is rapid and since flies and other insects are so numerous, diseases like cholera, typhoid and dysentery are more likely to occur in warm climate. Public health, therefore, mainly depends on the efficiency with which all refuse is collected and removed. Civic sense is a forerunner of good sanitation.

Ways to Reduce Waste

1) Use reusable grocery bags, and not just for groceries. ...
2) Purchase wisely and recycle. ...
3) Compost it! ...
4) Avoid single-use food and drink containers and utensils. ...
5) Buy secondhand items and donate used goods. ...
6) Shop local farmers markets and buy in bulk to **reduce** packaging.
7) Do not print unnecessarily, save paper

What are the 5 R's of waste management?

As citizens of a society we have a responsibility to manage our waste sustainably. We can do this following the five R's of waste management: reduce, reuse, recycle, recover and residual management

Methods of Solid Waste Disposal and Management

- Open burning.
- Dumping into the sea.
- Sanitary Landfills.
- Incineration.
- Composting.
- Ploughing in fields.
- Hog feeding.

- Grinding and discharging into sewers.

WHAT IS SOLID WASTE?

Solid waste is the useless, unwanted and discarded material resulting from day to day activities in the community. Solid waste management may be defined as the discipline associated with the control of generation, storage, collection, transfer, processing and disposal of solid waste.

The seven most common types of garbage are:

- Liquid or Solid Household Waste. This can be called 'municipal waste' or 'black bag waste' and is the type of general household rubbish we all have.
- Hazardous Waste. ...
- Medical/Clinical Waste. ...
- Electrical Waste (E-Waste) ...
- Recyclable Waste. ...
- Construction & Demolition Debris. ...
- Green Waste.

THE SEVEN MOST COMMON TYPES OF GARBAGE ARE:

1) LIQUID OR SOLID HOUSEHOLD WASTE

   This can be called ‘municipal waste’ or ‘black bag waste’ and is the type of general household rubbish we all have. It can be liquid or solid.

2) HAZARDOUS WASTE

   Hazardous waste is usually regulated by federal government and includes some dangerous pharmaceuticals, mercury, solvents, some paints, aerosol cans etc. It may be inflammable, toxic, corrosive or reactive. This type of waste can create public health issues.

3) MEDICAL/CLINICAL WASTE

   Pharmaceutical waste like that produced by health care centres, clinics, hospitals, vets etc. may also be found in the home, and should be disposed of responsibly, even if it is not marked hazardous.

4) ELECTRICAL WASTE (E-WASTE)

   E-waste is generated from electrical devices, including computers and computer parts, printers, DVD and music players, TVs, telephones, vacuum cleaners and so on. These may contain toxic metals like lead, mercury, cadmium, and brominated flame retardants, which are all harmful to humans and the environment.

5) RECYCLABLE WASTE

   These are items and materials that can be converted into a reusable material. They are commonly found in household garbage -including paper, cardboard, beverage and food containers, metal and glass.

6) CONSTRUCTION & DEMOLITION DEBRIS

This is usually bulky and weighty material, generated during construction and renovation projects. It may include materials such as ceiling tiles, plumbing fixtures, carpeting, wood, concrete, bricks, fill dirt, etc.

7) GREEN WASTE

This is comprised of food and landscaping waste, which will break down naturally under the right conditions. It includes grass, weed clippings, tree limbs and branches, waste from vegetable produce, bread and grains, as well as paper products.

These are the seven main types of rubbish that affect Brisbane homes. Industrial buildings also create industrial waste from glass, leather, textile, food, electronics, plastic and metal product manufacture. All of these may require the help of a professional rubbish removal service to dispose of responsibly and legally.

Scavenging of Refuse:

It is the collection and removal of all street and domestic refuse, except human excreta, by means of manual labour. As the refuse decomposes more rapidly in our country than in temperate regions; especially during the rains, when it also gives rise to offensive smell and serves as breeding place for flies and provides food for rats and vermin, storage of refuse should not be allowed, and it should be removed quickly to some distant place. The habits of people and lack of civic sense of throwing all waste matter into the streets makes the work of cleansing the city more difficult, whilst their customs and modes of cooking and cleaning their utensils further add to the amount of household refuse.

Various methods are adopted in the cities and towns for the collection and removal of refuse such as bullock or donkey carts in town and wagons in cities.

Collection and Removal of House Refuse:

Unfortunately, in Pakistan, the practice of depositing refuse and waste material in the street or on the footpath is common in most cities. This is to be avoided by providing sanitary dustbins into which the refuse should be deposited, and which should be emptied twice a day. These dustbins should be placed at convenient spots in the streets and lanes. Each household should have a container with a lid or a plastic bag and kept at one corner of the courtyard to collect all refuse in it, and this can be emptied or deposited (if bag is used) in the street dustbin, morning and evening by the private sweeper.

Street Cleaning:

Most of this work should be done during the night. In large cities, definite hours are fixed for summer and winter. This is usually before sunrise, and, a few hours before sunset.

Disposal of Refuse

In urban communities, refuse disposal becomes an important and sometimes vexing sanitary problem. Several different methods are in use and their choice depends upon local conditions. Reasonable sanitation at reasonable cost should be aimed at.

In rural areas the disposal of refuse is a simple matter. Garbage is fed to domestic animals and chickens. Failing this, it should be buried in the field or garden or buried with other rubbish. In rural area, the refuse to be disposed of usually does not contain night soil (solid excreta) as the

people go to the fields for the call of nature. This refuse is usually collected in heaps just anywhere in the village. This is, however, objectionable. A great deal of emphasis is being carried out for pitting of refuse and finally using it in the fields as manure.

The health worker should get the support of the village community and arrange for the refuse to be collected and got rid of regularly, especially after market days. Any of the simple methods described below may be used.

Dumping and Filling:

If the site chosen for dumping is low and there are depressions, then this dumping would be advantageous, as it would fill up the depressions. The objection to this method is that if the depressions to be filled are near human habitations, it might produce breeding of flies, harbouring rats and other vermin.

Tipping: It is covering the refuse with a layer of earth, to exclude air, so that it will decompose without causing a nuisance. It should be situated at least a quarter of a mile away from the settlement, preferably out of sight and downwind. It should be dry or properly drained. After each day's refuse has been deposited, it should be covered over with a firm layer of earth.

Controlled Tipping:

In this method the refuse is dumped in layers of six feet in depth and covered with a layer of earth to exclude air so that it will decompose without causing a nuisance. The tip should be protected by screens so that light articles like paper and dry leaves cannot be blown about. One layer of refuse is allowed to settle before another load is deposited.

Compositing:

It is an improved method of dumping, since it is cheap and convenient way of disposing off refuse and should be used more often. Wet and dry heaped in alternate layers, onto a plot about 8 feet square to a depth of about 5 feet, and then covered with grass or earth. Fermentation decomposes the refuse, which should be turned over after 30 days and again after 60 days. After 90 days the refuse is 'ripe' and may be put on the land as fertilizer.

Burial of Refuse:

This is done in long trenches under a layer of earth to dispose off organic matter.

Incineration (Burning):

This is the most satisfactory method, although considerably more costly. This may be done in a variety of ways, some of which are much better than others. Simple 'open-air' burning is not very effective. Modern incinerator with intelligent stoking is the chief essential required for complete sterilization of refuse. Rubbish waiting to be burnt harbours vermin and gets blown

about.

Features of Incinerator:

1) Furnace with fireproof brick lining
2) Approached by an inclined roadway to the top or tipping platform
3) In the center of this platform is a series of feeding holes into which the refuse is shot to fall in to the furnace below
4) The stokers throw the refuse on to the fire and after burning, the refuse is reduced to almost ¼ of its weight and consist of fine ash and clinkers
5) Forced drought is produced by steam jet or fans, which raise the temperature inside to 150-200 ºF, combustion is very complete

Collection, Removal and Disposal of Human Excreta:

Disposal of excreta is most important but most difficult matter whether the place involved is a village, a town or a large city.

Water Carriage System:

When human excreta and urine is taken away by a system of drains called sewers, flushed by water to a place outside the town it is referred to as Water Carriage System.

Waste matter consisting of liquid and solid human excreta together with liquid refuse from cow shed, stables, homes, factories etc. is called sewage. Wastewater from homes, unmixed with solid excreta as from kitchen, pantry and bathroom is called sullage.

Conservancy System:

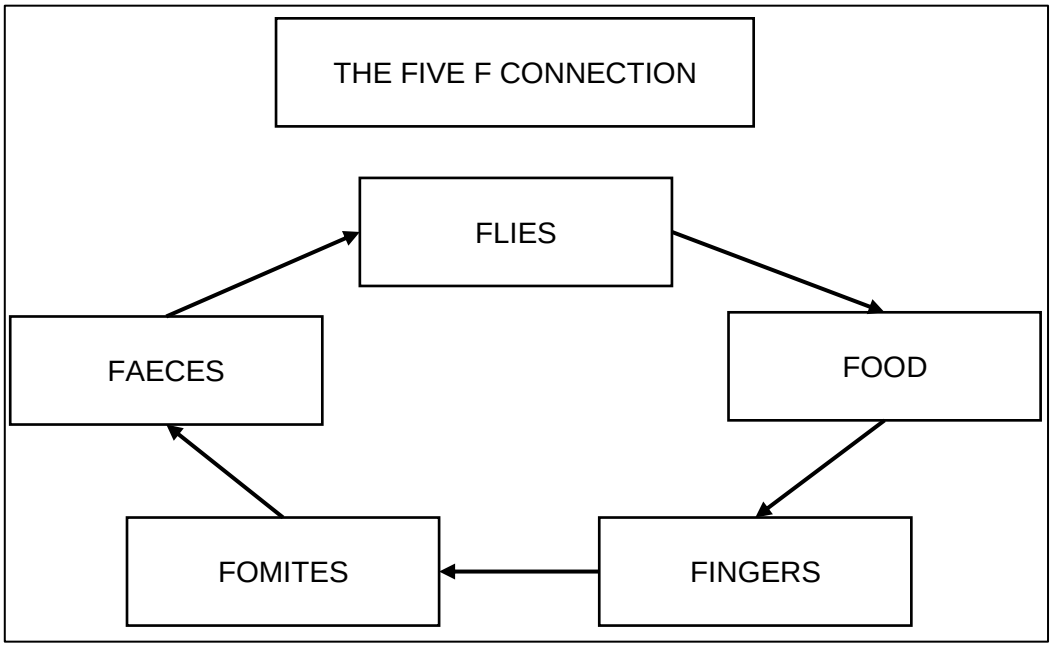
Conservancy is when human excreta and urine are collected and removed by hand or by mechanical means. In all such places where, due to lack of funds water carriage system cannot be installed, i.e., the excreta cannot be carried from the premises by means of sewers, it must be removed otherwise. Arrangements must be made to collect it from the houses (privies and latrines) by dry method, so called, because no water is used in this method to remove it.

The effect of the conservancy system on Community Health is enormous, beginning with the persistent smell of human and animal excreta in and around the houses, up to pollution of food, soil and water supply of a large town or the transference of disease by flies or other insects.

Any attempt at improving the sanitation of a town/village, is bound to fail, until the collection removal and disposal of nightsoil is dealt with in a strict and most practical manner.

Excreta disposal in villages:

The hygienic disposal of excreta is important because the infective organisms for many diseases leave the body in the faeces and some in the urine. The diseases that can be spread from faeces are bacillary and amoebic dysentery, the typhoid fevers, cholera, poliomyelitis, infective hepatitis-A, food poisoning, schistosomiasis (intestinal) and all the intestinal worms. All animals and humans produce excreta and when many people are living together it becomes very important to dispose of their excreta safely.



This is often called the faeco-oral route of transmission. Many people in rural areas still defecate in the bushes. To improve sanitation, it is necessary both to provide simple toilet facilities, which are cheap and easily made by any family and also to help people understand the importance of using them. The most important method of excreta disposal in rural areas is the pit latrine.

Different types of Latrines

1) Pit latrines: A pit latrine consists of a hole in the ground, a squatting plate for sitting when defecating or urinating, and a hut to give privacy and protection from the weather. The main purpose of the latrine is to deposit faeces where they are safe from flies, feet and fingers.

2) Bore-hole latrine: May be bored with a 12–18-inch earth auger. This is a kind of big screw with which men can dig a hole 15 feet deep in a few hours, if the soil is suitable.

3) The Commode: A latrine seat fixed on a night soil receptacle with self-closing lid. The contents can be flushed.

4) Trench latrine: It is a multiple pit latrine. A trench is dug with a number of holes with dividing partitions constructed over it. Temporary work camps often have trench latrines.

Disposal of Sewage

The main objective is to alter the unstable constituents into stable chemical compounds so that it does not create nuisance or do harm to health.

Methods of Sewage disposal:

1) By dilution
2) Discharge into river
3) Discharge into sea
4) Land treatment
5) Broad irrigation/ sewage farming
6) Intermittent downward filtration in porous ground
7) Chemical treatment
8) Lime, aluminium sulphate etc.
9) Biological treatment
10) Septic tank; anaerobic liquefaction followed by aerobic nitrification
11) Activated sludge process; raw sewage is mixed with activated sludge for complete clarification of sewage.

14.9 BEHAVIOURAL CHANGE COMMUNICATION

14.9 BEHAVIOURAL CHANGE COMMUNICATION

Communication:

Communication is derived from the Latin word communis, which means “common” or “general”. And that is exactly what we attempt to do when we communicate, we try to find something in common between ourselves and the person(s) with whom we are communicating.

Communication can also refer to the process of exchanging ideas and information between people. Components of the process include verbal and non-verbal messages transmitted through one or more channels from message senders to receivers. Providing feedback is very important in communication.

Communication is a process of conveying information, thoughts, ideas, knowledge, emotions from a source to a receiver. The only way you can determine whether the purpose of communication has been understood is to obtain feedback.

Communicator is one who communicates with a person or a client to convey a message.

Health Educator is a person who conducts health education of people or the community.

Roles of a Communicator: A communicator does not just tell or talk to clients & peoples but to be a good or effective communicator, she / he has many roles to perform some of them are indicated by the acronym COMMUNICATOR (block attached).

C	Counsellor
O	Opinion Seeker
M	Manager
M	Moderator
U	Unifier
N	Needs Identifier
I	Information Giver
C	Civic Leader
A	Arbiter/Assistant Problem Solver
T	Trainer
O	Organizer
R	Record Keeper

What is behaviour change communication?

Behaviour change communication (BCC) is an interactive process with communities to develop messages and approaches for specific groups using a variety of communication channels to develop and maintain positive behaviours.BCC also promotes and sustains individual, community and societal behaviour change. It recognises that behaviour change is a process and that individuals usually move through several intermediate stages before they change their behaviour. The objectives of BCC are to raise awareness, increase knowledge, increase intentions to practise a certain behaviour and create advocacy for a certain behaviour.

THE CHANGE PROCESS

The purpose of communication is to bring about a change in the behaviouhr of a person. The change is a process to achieve certain results i.e. bring about the desired alterations in the receiver's knowledge, thoughts, attitude, action, or practice.

The Change Forces: The forces that enhance the change i.e. stimulate or increase the willingness of the client to change are called the Change Forces

These are of two types:

Internal Change Forces:

Related to benefits of self Concern = for one's health

- Fear of unwanted pregnancy.
- Personal / professional development.
- Greater control of one's life.

Related to benefits of family

- Better quality of home-life.
- Improved family health.
- Financial stability.
- Better couple adjustment.

External Change Forces:

- Family encouragement / support.
- Community support.
- Government / institutional support.
- Socio -cultural and economic conditions.
- Motivator's commitment and assistance.

The Resistance Forces:

These are the forces which hinder the change. These are again of two types:

Internal Resistance Forces:

- Cultural / religious beliefs and norms.
- Inadequate knowledge / misconceptions arising from:

Lack of information.

- False information.
- Conflicting information
- Personal negative experience.
- -Anxiety / uncertainty / apprehension due to:
- Fear of side-effects.
- Fear of exposing one's body.
- -Previous unpleasant / negative experience.
- -Lack of belief regarding information / explanations given.
- -Lack of support / agreement from influential.
- -Need for stronger / convincing proof for the advantage claimed
- -Inadequate realization or proof of benefits.
- -Generalized fear to take risk.
- -Antagonism or Lack of Credibility of service provider
- -Apathy or indifference for the need for
- -Inadequate time allowed.

External Resistances Forces:

- Family pressure (parents / in-laws)
- Pressure from peers.
- Pressure from neighbors / community.

FACTORS INFLUENCING CLIENTS' DECISIONS

There are individual and community factors that influence decisions. The communicator/counsellor should be able to identify both individual characteristics and community influences that affect client's choice.

Individual Characteristics:

- Age
- Number and Gender of Children

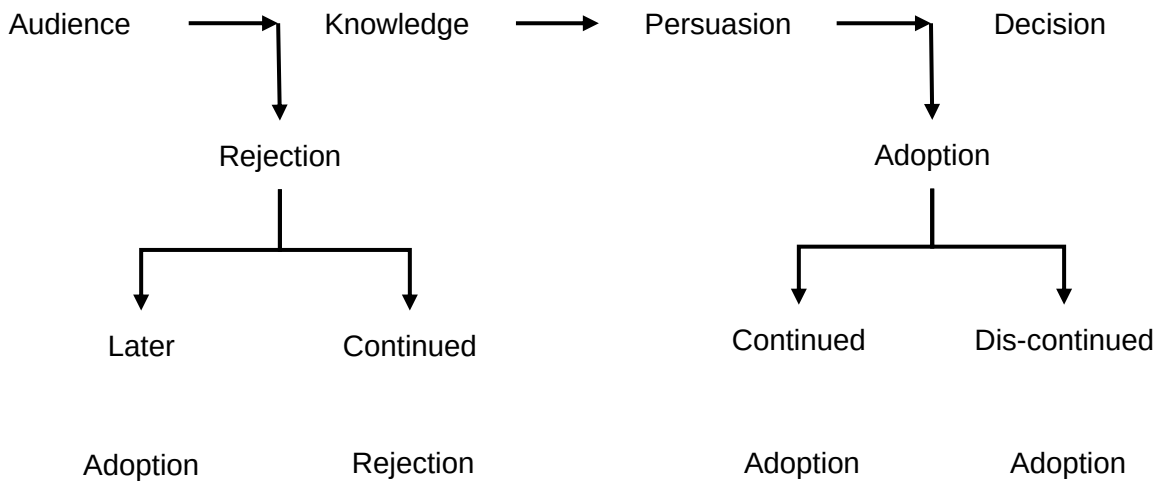
- Health Status of the Client
- Health Status of the Family
- Economic Status
- Educational Level of Both Partners
- Previous Contraceptive Use and Experiences
- The Nature of Relationship with partner
- Sexuality
- Religious Beliefs.
- Personal Beliefs.

Community Influences:

- Word-of-Mouth: the effects of relatives and satisfied or dissatisfied clients.
- Culture: The cultural expectations concerning family size for example, in many cultures, a large family size is expected: (for example, a woman's role may be tied to maternity status, while a man with many children may feel more "manly").
- Religion: The pronouncements of religious leaders on family planning.
- Politics: Governmental population policies.
- Social: The status and roles of women in the society.
- Health Providers: Their knowledge and skills and willingness to provide family planning services, and skills.
- Information: Educational messages and promotional efforts concerning family planning.

Misconceptions: Misconceptions about family planning, contraceptive methods and RH issues

Decisions in Behavioral Change Process:



audience is given considerable information and their knowledge is enhanced. And they are persuaded to make a well-informed decision. Three situations may occur:

- A client has the right to and may reject taking a particular action. This rejection may be continued rejection or with further information, thought and consideration change into later adoption.
- A client may decide to change behavior / adopt a certain F.P method. This adoption after experience may change into discontinuation of method (due to side effects, inconvenience etc) or may become continued adoption.
- After the interaction with the provider the client may choose to continue a particular method and continues to practice it and this result also in continued adoption.
- One cannot change the client's feelings. Only they themselves can do that. But when the counsellor reflects the client's feelings, it shows that she understands and expresses that the client has right to feel that way.
- As clients talk about their feelings, they understand themselves better. Then they may find it easier to make wise and healthy choices.

Client-Provider Communication:

People can make informed choices without ever seeing a family planning provider. When people visit providers, however, there is much that providers can do to ensure informed choice. Providers can ask new clients what method they prefer and usually can give them that method. They can ask continuing clients whether they would like to switch methods. They can avoid making decisions for clients or interfering with their ability to make choices. In effective counselling for informed choice, clients play an active role, asking questions,

expressing concerns, and participating equally with providers.

Effective Communicator:

There is no single group of characteristics to describe an effective communicator. Studies on communication behaviour, however, have revealed some specific characteristics that are associated with effective interpersonal communication. Some of these characteristics include source-

credibility,

empathy,

sincerity,

altruism (unselfish, self-sacrifice) and

sense of humour.

Such characteristics are manifested differently, depending on the personality and skills of the communicator. For example, in some cases an effective communicator is a fluent speaker; or one who has the charisma and persuasiveness of a leader. To a great extent, effective communication is the result of one's ability to feel for others, to empathize or to put oneself in another's shoe and to treat clients with respect and equity.

To be an effective communicator, one should know the audience. If they are young or old, married or unmarried, language they speak, their level of education, what and how much they know about responsible parenthood, kind of values they hold in this regard and if married what their desired family size is. The communicator should know the status of the receiver or audience if they are possible or potential clients, ordinary and influential people, government officials and or fieldworkers. What is their knowledge and attitude towards the idea / problem? This helps the communicator to be sensitive to what others are feeling and thinking and to be perceptive to their needs and will.

To get this information the communicator has to ask questions or probe. Knowing these and other things about the audience will facilitate the exchange of ideas and ensure effective communication.

Qualities of a Good/ Effective Communicator:

An effective communicator needs to possess certain qualities which make her successful. She may already possess some qualities which are inborn but others she will need to develop in order to acquire the desired standard of an effective change agent.

The acronym SHAPE depicts the essential qualities desired in a Communicator i.e.,

sincerity,

sensitivity,

honesty,

humour,

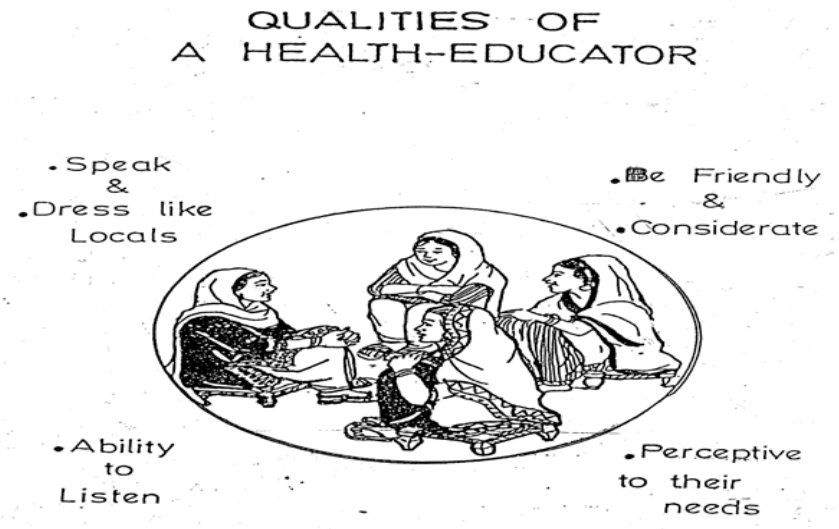
attentiveness,

being articulate,

proficiency and

empathy

S	***Sincere***	Gives genuine and correct information; is straight forward and open
	Sensitive	Sensitive to the problems of the client as to what the client feels or thinks
H	**Honest**	Tells the truth and does not hold back information that the client wants or needs
	Humorous	Keeps discussion light and does not make it boring
A	**Articulate**	Expresses the facts clearly and fluently
	Attentive	Listens actively to what the client has to say
P	**Proficient**	Delivers services skillfully
E	**Empathetic**	Puts herself in the client's place and tries to understand how the client feels



Ways of Communication

The communication is of two varieties i.e., one way or two-way communication:

One-way communication

means that messages and ideas are passed on by the sender with no feedback (response or reply) from the receiver / audience e.g., lecture delivery in classroom session.

Two-way communication

means the sender sends the message but also receives response / feedback from the receiver. It provides a chance to the receiver to ask questions in between e.g., interactive lecture/discussion.

APPROACHES /TYPES OF COMMUNICATION

Intra-Personal communication:

It is the thinking of an individual, when one talks to himself, assigns meanings to a message, rationalizes it and thinks about the pros and cons etc.

Inter-Personal Communication:

It is a face-to-face interaction between and among people who are constantly aware of each other. It is of two types:

One on One communication:

It is a two way talk between two persons i.e., the sender and the receiver.

Group communication:

It is a communication of a person with two or more persons. It is of following types:

Small group communication:

It is the communication between three to five people. The group should be small enough so that all members can easily interact and are easily involved in the process.

Large group communication:

It is the communication between six or more people. It is not as effective as the small group communication.

Organizational communication:

It is the communication occurring within an organization or an office etc.

Public Communication:

Occurs when one or a few persons are communicating to a large group. It is a one-way

communication but can evoke a reaction if improperly planned e.g., lectures, speeches.

Mass communication:

It is a form of public communication when large masses are addressed. It is a one-way communication and media is involved e.g., delivering messages through radio, television and press etc.

BASNEF MODEL

To change a person's behaviour, the counsellor / communicator / change agent should first understand her/his own behaviour and change it according to the desired standard. We will deal with these factors, one by one

B	Beliefs
A	Attitude
S	Social
N	Norms
E	Enabling
F	Factors

Belief:

It is defined as an idea that is thought to be true by an individual. It may or may not be supported by facts. Our beliefs have strong influences on our behaviour.

Some common beliefs are:

- God will punish us if we go against nature by accepting family planning.
- A man will lose his strength after having a vasectomy.
- Eating fish with milk will cause leucoderma etc.

Some other models are briefly discussed below

Model 1

Social change behavioural change decision making attitude change

Self awareness knowledge

Health consciousness

If a person is conscious of his health, he gains knowledge for awareness and changes his attitude and makes useful decisions which bring about a behavioural change in him. A change in behaviour of many persons results in a social change in the community.

Model 2:

Another model describing the change process is the AIETA model.

ADVOCACY ADOPTION TRIAL EVALUATION INTEREST AWA

Awareness – has general information:

Awareness is the first step towards behaviour change. If a woman does not know about the presence of a nearby health facility, she will never be able to go there to avail the services provided there. Similarly, when a mother does not know that there is vaccine available for the seven major killer diseases of children, she will not be able to get her child immunized.

Interest – willing to learn more because there is a felt need:

People do what they are interested in. Mothers are interested in the health of their children, so they can adopt behaviours which make their babies healthy such as practicing breast feeding, getting their children vaccinated and giving them balanced food. Whenever there is need for a behaviour change, it is important to recognize that what will be the target group which is most interested in the outcome.

Evaluation –weighs the pros and cons:

of the practice and its usefulness to the person / family and this result in a decision to try or reject. This is an important step in behaviour change. People get motivated by knowing the benefits of a certain behaviour and then are ready to change their existing behaviour. People will adopt small family norms if they realize that they can educate their children in a better way by having fewer children and can thus lead a better and successful life. This motivation for the betterment of the family can lead to adoption of contraceptive methods by a couple.

Trial –decision is put into practice and implemented:

Any new thing needs to be tested before final adoption; the same is true for behaviour also. Once motivated, we try to test the innovation. A woman motivated to use the oral contraceptive pills will start the pack very cautiously and will only continue if she feels comfortable with them, and does not experience many side effects.

Adoption / Practice –person
(or group) decides the practice is good and adopts it:

Once the trial is successful, people will start practicing the behaviour; the woman who does not suffer from the side effects of the oral pills will come to the clinic with a bigger demand of

the contraceptive, with the intention of adopting the method for a long period. Similarly, if a couple gets comfortable with the condom will prefer to use it as the contraceptive of choice.

Advocacy:

When people adopt a certain behaviour, they just not only remain practicing it but also recommend that behaviour to other people, and this process is called advocacy. If a man finds out that vasectomy did not affect him adversely, he will try to convince his friends and relatives that it is a simple and easy procedure - an appropriate contraceptive choice and the

rumors regarding it are all false, so that other people may also opt for vasectomy. Most people go through these stages but people in a community may be at different points of the change process.

CATEGORIES OF COMMUNICATION

Communication can be of two categories i.e. nonverbal and verbal.

NON-VERBAL COMMUNICATION means all messages conveyed through signals / symbols without use of written or spoken words. Nonverbal interaction is equally important as verbal communication. Nonverbal signals are crucial for communicating interest, attention, warmth, and understanding to clients. Sometimes a negative symbol / signal (even if unintentional) may mar the good words spoken. The Non-verbal communication forms nearly 67% (2/3) of a communication. All actions, gestures, facial expressions, signals and symbols i.e. body language (excluding spoken words) in an interpersonal interaction comprise the nonverbal communication. A good relationship with a client is not just a result of what the client hears, but what she observes and senses about the counsellor through her body language. Remember that nonverbal cues vary from culture to culture. They consist of:

Positive Nonverbal Cues which should be practiced:

- Leaning towards the client.
- Smiling, not showing tension.
- Avoiding nervous or inappropriate mannerism.
- Presenting facial expressions that inspire trust.
- Maintaining eye contact with the client.
- Making encouraging gestures, such as nodding the head.
- Having appearance and dress that convey respect.

Use an appropriate tone of voice showing that you are not frustrated.

Effective communication is the result of one’s ability to feel for others, to empathize or to put oneself in another’s shoe. It helps to be sensitive to what others are feeling and thinking.

Negative Nonverbal Cues which should be avoided:

- Not maintaining eye contact.

- Reading from a chart rather than speaking naturally.Do not sit back with a stiff neck.
- Do not perform other activities while providing counselling.
- Do not look at the wall clock / wristwatch to show you are in a hurry
- Yawning or looking at papers or out of the window.
- Frowning.
- Fidgeting.

One may sometimes identify feelings incorrectly but be careful to allow the clients to correct it. Encourage the clients to talk more about these feelings. They may either accept them or overcome them; thus, they will find it easier to make changes in their behavior.

VERBAL COMMUNICATION

Verbal Communication consists of words only whether spoken or written, heard or read. Spoken words form nearly 33% (1/3) of the total communication.

Verbal Communication is all that is expressed in 'words' i.e., those that are spoken, heard, written or read.

Components of Verbal Communication skills are:

Speaking: It is the expertise of using the spoken words effectively

- Using simple language
- Using an appropriate tone of voice
- Giving verbal encouragement
- Paraphrasing
- Clarifying
- Giving feed back
- Effective questioning

Listening*:*

It is the proficiency of hearing the words. It is simple hearing, but it should also include Effective Listening.

Writing:

It is the art and science of writing words according to a prescribed format this skill will be improved in the chapter on Management of F.W.C i.e., writing letters, applications and reports and maintaining records.

Reading:

It is the art of interpreting or getting to the meaning of written, printed or embossed words or

signs using the eyes or for Braille by using the fingertips. Reading is not of much concern in this chapter.

Effective Use of Verbal Communication Skills

The effective use of the above verbal communication skills communicates to clients that they have been heard, understood and accepted, and helps clients understand themselves and their own needs.

SPEAKING:

To ensure effective speaking, one should acquire the following skills:

Using Simple Language:

It's better to talk to the client in her language using simple words and avoiding the technical terms. Clients feel comfortable if appropriate language is used. Unfortunately, because the health care providers are so familiar with medical terms, they often use words that clients may not understand and may find intimidating. Technical information needs to be geared to the level of education and language of each client.

Tone of Voice:

Tone of voice is an important component in building rapport with the client. The service provider should talk in a soft tone and avoid being harsh. How the counselor behaves is as important as what the counsellor says.

Verbal Encouragement:

Encouraging the client verbally gives confidence and helps the client to open up and express the feelings.

- Lean forward slightly while listening sympathetically.
- Give various verbal cues, such as "Yes," "I see," "Mm-mm," "right," or "OK" while listening to the client.
- Nod head sympathetically during the conversation.

Paraphrasing:

It is restating the client's message simply. It helps the counsellor to express what the client is saying, and it makes the client feel that she or he has been understood. Counsellor use paraphrasing to make sure that they have understood what the client has said and to let the client know that they are trying to understand the client's basic message. Paraphrasing supports the client and encourages him or her to continue speaking.

Feedback:

It is a way of helping another person change his or her behavior. It gives person information about how he or she affects others. It allows individuals to learn how well their behaviors match with their intentions.

Feedback is a way of:

- Helping another person to consider changing her or his behavior.
- Communicating with another person about how she or he affects others.
- Helping individuals learn how well their intensions match their behavior.
- Helping people keep their behavior close to their intentions.

Giving effective feedback requires objectivity, respect for the listener's feelings, and positive verbal and nonverbal communication. Both paraphrasing and clarifying are involved while giving feedback. It can help make each client feel that she or he is being treated as an individual. Giving constructive feedback in a client interaction can help build a good client counsellor relationship. This is an essential skill for any participants who are or will be trainers or supervisors.

Characteristics of effective feedback

- Feedback is descriptive rather than evaluative. Describing your observation lets the other person use the feedback or not, as she or he finds it fit. Try starting feedback statements with phrases such as "I saw that……" "I observed that……," or "I heard you say"
- Feedback is specific rather than general. If feedback is given to someone and she is told that "you are dominating". This feedback will not be as useful as to tell her "Just now when we were discussing the issue, you did not listen to what others said I felt that if I do not accept your arguments, you would attack me."
- Feedback is directed toward behavior that the receiver can do something about. When people are reminded of shortcomings that they can do nothing about, or cannot control, they may become frustrated.
- Feedback is well-timed. In general, feedback is most useful at the earliest opportunity after the observed behavior. Giving late feedback is of little value.

Effective Questioning:

It is asking questions in non-threatening words and manner which puts the clients at ease and helps them to express their believes, values, attitude, feelings and knowledge.

Method of "questioning effectively

- Use a tone of voice that shows interest, concern, and friendliness.
- Use words that clients understand.
- Ask only one question at a time. Wait with interest for the answer.
- Ask questions that encourage clients to express their needs. Examples are: "How would you feel if you became pregnant soon?" "How do you think your spouse feels about family planning?"
- Use words such as "then?" "And?" "oh?" These words encourage clients to keep talking.

- When one has to ask a delicate question one should first explain why it is being done- for example, asking about number of sexual partners to find out about STIs risk.
- Avoid starting questions with “why.” Sometimes “why” sounds as if one is finding fault.
- Ask the same question in different ways if the client has not understood.
- Avoid repeating questions that the client does not want to answer.

COMMUNICATION BARRIERS

Certain factors interfere with communication when the message is not conveyed, heard or understood, and this causes a communication gap. These factors are called barriers to communication. These are:

- Psychological barriers
- Emotional barriers
- Perceptual barriers
- Selectivity
- Anxiety and Fear
- Lack of Interest
- Physical barriers
- Noise
- Poor Listening
- Language
- Culture
- Social Aspects
- Gender Difference
- Religious belief

Levels of Barriers:

Communication may be hampered or hindered at different levels. Communication can be as complex as any other process having many elements and components and involving behavior patterns and individual characteristics. There are many barriers and difficulties that can hamper the communication between sender and receiver. Some of these barriers are discussed below. To understand the grid, the steps and barriers that the communication process passes through should be followed from left to right across each row

HOW TO GET FROM				
This Step		**To**	**This Step**	
1.	Say	The voice should be loud and clear. A whisper will not reach the receiver.	1.	Hear
2.	Hear	Simple language should be used	2.	Understand
3.	Understand	Factual information should be provided to the receiver to believe it. The receiver will not believe something incredible.	3.	Believe
4.	Believe	Even if one believes, one may not practice. Therefore, there needs to be an enabling "factor" to achieve practice.	4.	Practice
5.	Practice	To maintain practice reinforcement is necessary. Lack of appreciation may revert practice.	5.	Continuous Practice

Difference between 'saying' and 'hearing':

As the goal of communication is sharing meaning and ultimately to bring about a change in behavior, the most important element in this process is delivering the message in a way and through a channel that allows it to reach the receiver. Message delivery alone is not enough. Ensuring that the message has been received by the intended audience is the key factor.

Difference between 'hearing' and 'understanding':

Sometimes the sender can send a message to the receiver and the message is received well. However, this does not mean that the message has also been understood. The reasons for not understanding could be that the message is in a language or spoken in a way that the receiver does not understand. Another problem could be that the sender has sent a message in a written form, but the receiver is not literate. Therefore, it is very important to know the receiver well enough to make sure that the message is in a form that the receiver can understand or decode.

Difference between 'understanding' and 'believing':

All messages that are understood are not always believed. We get much information every day and sometimes we do not believe it. Therefore, it is important for the sender to ensure that the message is not only understood but believed as well. One way to do this is to quote a credible source or give data that supports the message. For example, one might say: spacing of 3-5 years between births enhances the chances of survival and better health for

mother and child [message] according to the latest research published by Johns Hopkins University [credible source].

Difference between 'believing' and 'practicing':

It is important for a communicator to make sure that the message is not only credible but also that it helps achieve the goal of initiating the required action from the receiver. This may require creating an enabling environment for the receiver to act in a certain way. For example: convincing a woman to start using contraceptives is important; however, it is also important that she is able to access the contraceptives easily and also use them free of any fear or pressure. This means ensuring the supply as well as empowering the woman to convince her husband or family members if they object to the use of contraceptives that she should be able to use them.

Difference between 'practicing' and 'continuing to practice':

There are so many practices that people may start, such as daily exercises for losing weight or avoiding junk food, but later on the relapse into old habits once the initial phase of enthusiasm is over and they discover that it is a burden on their time or involves other costs. The important transition across the barriers between practicing and continuing to practice needs to be understood and strategies need to be utilized that will help remove barriers. The receiver needs constant appreciation and help in continuing to utilize new and better practices. For example, a woman may abandon the use of a contraceptive after experiencing some side effects. Using prior information, reassurance and follow up, a provider can help the woman to continue using the method or to switch to another method without risking an unplanned pregnancy.

Example

Client: 'I want to use the IUD, but my sister said that it can travel around your body and stick in the baby's head.'

Counsellor: 'You have some questions because of what you have heard about the IUD, and you want to find out what is true'.

Guidelines for paraphrasing

- Listen for the client's basic message.
- Restate to the client a simple summary of what you believe is his or her basic message.
- Observe a cue or ask for a response from the client that confirms or denies the accuracy of the paraphrase.
- Do not restate negative images that clients may have stated about themselves in a way that confirms this perception. For example, if the client says, "I feel stupid asking this", it is not appropriate to say, "You feel ignorant."

Clarifying:

It is making an educated guess about the client's message, for the client to confirm or deny.

Sometimes a client's message is so vague that it is difficult to understand. At such a time, it is useful for a counsellor to help a client clarify her or his message. Like paraphrasing, clarifying is a way of making sure the client's message is understood. Clarifying is used by the counsellor to clear the confusion if a client's responses are vague or not understandable.

Example

Client: "I am using the pill and I like it, but my sister says that with Norplant I do not need to remember to take anything."

Counsellor: "Let me see if I understand you. You are thinking about switching from the pill to Norplant because Norplant would be more convenient for you."

Guidelines for Clarifying

- Admit that you do not have a clear understanding of what the client is telling you.
- Restate the client's message as you understand it, asking the client if your interpretation is correct. Ask questions beginning with phrases such as "Do you mean that…...?" or "Are you saying…..?"
- Clients should not be made to feel as if they have been cut off or have failed to communicate. Therefore, do not use clarifying excessively.

14.10 BEHAVIOUR CHANGE PROCESS

14.10 BEHAVIOUR CHANGE PROCESS

Behaviour:

It is the mannerism or functioning of an individual. It is the observable actions of a person i.e., which can be seen or heard. People behave in a certain way due to a number of factors such as their beliefs, values, social customs, attitudes, intention to behave, and influence of others or social pressure.

Environment and Human Behaviour:

All new practices mean a change in people's behaviour, and usually people are not willing to change their behaviour unless they can see a personal advantage in that change. This advantage may be avoiding disease, making more money or just being more comfortable but there must be some attraction to the new idea.

The best way to introduce any change is to find out if people consider the matter as problem or not. In that case the first thing to do will be to help them realize, by talking and discussion, that there is a problem which is worth their thought and attention. They should then be encouraged to think some possible solutions and, if necessary, be guided towards choosing one which is most suitable to the situation.

KNOWLEDGE, ATTITUDE AND PRACTICE (KAP).

A good communicator should find out what people know (knowledge), what they feel (attitude) and how they behave (practice).

K	Knowledge
A	Attitude
P	Practice

KAP Gap:

The KAP Gap is a condition where those who have heard about RH / FP could benefit from it but are not using any FP method. It is a Gap because while these men and women believe FP is good yet they are not practicing it.

Reasons for the KAP Gap:

1) Insufficient knowledge about RH issues
2) Fear of possible side-effects of medicines and contraceptives
3) Limited accessibility of services and supplies
4) Poor communication between husband and wife
5) Husband's objection to wife using a method or seeking health advice

6) Parents/in-laws objections to use of methods/services

7) Unpleasant clinic atmosphere

FACTORS INFLUENCING BEHAVIOUR

People do not change their behaviour merely because a health worker, political leader or even a family member asks them to do so. Knowledge may also not always lead to a change in behaviour e.g., in this modern age of communication most people have heard of family planning i.e., there is certain degree of awareness but this is not enough to lead to behaviour change. Certain factors which influence behaviour are:

One's own beliefs

Beliefs of others exert social pressures (subjective norms) e.g. friends, parents and superiors.

Values also influence one's behaviour.

Value is an opinion or standard that is important to an individual. Values can stem from and be influenced by religious, educational or cultural factors or they grow from personal experiences.

- No two individuals hold identical values. Each person's values and attitudes are shaped by culture and up- bringing.
- Each person is entitled to his or her own values. It is crucial that counsellors /communicators should respect clients' values and not try to influence clients who are making decisions about RH / Family Planning.

These influences support each other and the intention to do something is determined. On the other hand, there may be a conflict arising from our own beliefs and those of others.

OTHER FACTORS THAT INFLUENCE BEHAVIOUR CHANGE

Practices and ideas consistent with existing ideas and habits are more likely to be adopted quickly.

For example, if the health of children is considered important by the community, the relationship of family planning to the health of the children can be emphasized.

The need for the new practice must be understood.

For example, a woman who has just had her 5th baby is more likely to listen about family planning because it affects her own life.

Dissatisfaction plus awareness of alternatives is required for change. In terms of family welfare, the task of the F.W.W would be to lead her clients to perceive a better world by improving their living standard - to feel needs which cannot be satisfied without controlling family size.

An easily demonstrated practice is adopted more rapidly than a complex one.

In terms of family planning the FWW must be able to demonstrate the use and working of the various contraceptives available with appropriate visual aids. The language used must be simple, with precise details when giving instructions regarding the use of a contraceptive method.

Group Influence for the adoption of new practices.

In any community there are a number of groups. Some of these may be formal (like panchayats), others are of a private nature (like the Biradari), while still others may be based on patterns of sects, tribes or kinship. The role of the FWW is to facilitate communication on family planning and family welfare among the group members. The more conservative the community, the slower the process of change.

Thus, the beliefs, attitude, social norms and enabling factors, all influence shape the behaviour of an individual and if a change in behaviour is to be brought about, all of these factors have to be taken into consideration.

Elements of Human Nature that Influence Behaviour Change

There are at least six different factors of human nature that can influence why people change or do not change their health behaviour. All these elements can influence the effectiveness of a health communicator in various ways. They are the:

Physical Element: based on Pain, Discomfort and Risks

People will change their habits if the pain is greater than the benefits or even if the memory of the pain is great enough.

Rational Element: based on Knowledge

Some people will change health behaviour, if they understand the disadvantages of multiple pregnancies or a large family, know the consequences of unwanted pregnancies and know what to do to avoid them.

Emotional Element: based on the Intensity of Attitudes or Feelings

Some people will change their behaviour, if they feel an intense and personal fear of its consequences. Sometimes, this emotional response is manifested by a concern to protect others whom they love. Emotions may be negative, based on fear, danger, or positive, based on affection, concern and hope for a loved one.

Practical Element: based on Personal Skills in the New Behaviour

Some people will change their behaviour when they feel competent and confident in practicing the new behaviour. In the case of RH / FP, it could be the use of condoms, practice of the rhythm method or ability to use the pill, IUCD or other methods.

Social Element:

Some people will change RH/FP behaviour if they think they are supported by other people; spouses, friends, relatives, colleagues, workers associations, or if they are publicly encouraged during special meetings. They would feel more secure if supported in the direction of the desired behaviour change.

Environmental Element:

Includes Social, Economic, Legal and Technological Factors affecting Daily Life**.**

Some people change RH / FP behaviour because they have convenient access to supplies and services (such as family planning counselling, prenatal and postnatal care), and because they live in an environment where these services are legal, acceptable and economically desirable.

Attitude:

It is a view or opinion that is formed by values and beliefs. Beliefs turn into attitudes. Telling “big” lies will lead to punishment by God, will shape our attitudes towards this action. In this case our attitude towards “big” lies is that they are bad, where as “small” lies are not bad. Other examples of attitudes:

1) It is a woman’s responsibility to use family planning
2) It is considered immoral for women to get out without being accompanied by her husband or an elderly person
3) Certain foods are hot and cause abortion
4) A girl cannot marry without the consent of the father / guardian.

Subjective Norms / Social Norms:

We are not only influenced by our own beliefs, but also by the beliefs of other people; especially people whom we respect or like. One is more likely to be influenced by members of one’s family that is parents, elders, superiors and friends than by others.

If all the friends and relatives of a young mother bottle feed their babies, she will feel that breast feeding her baby is not normal. A man who does not smoke may feel under some pressure, if all his friends smoke and may take to smoking.

These social pressures (or subjective norms) determine our intention to behave, which is in turn influenced by our own beliefs (which determine our attitudes) and beliefs of others who exert social pressure on us. These influences support each other and our intention to do something is determined.

Personal biases/ beliefs:

On the other hand, there may be a conflict arising from our own beliefs and those of others. We may believe that a dehydrated child with diarrhoea should be made to drink in order to replace the lost body fluids, but the mother-in-law may believe in not giving any fluids to the

child thinking that it will worsen the condition. The stronger of the two influences will determine how we behave to control diarrhoea.

External factors:

Intention does not necessarily lead to action because, it is also necessary that the environment should be conducive, and the enabling factors should be available.

A woman might want to have a tubectomy, but she is afraid of her in laws, or the nearest facility where the operation can be done is 30 km from her home, or she does not have enough time to make the journey and so she cannot carry out her intention.

A mother might want to breast feed her baby, but she may be unable to do this during the daytime because babies are not allowed to be brought to office.

A family may want to provide their children with a properly balanced diet but due to non-availability of green leafy vegetables, or lack of money (the enabling factors) they are unable to carry out their intentions.

NEGATIVE FACTORS:

Resistance to change may be minimized by the following:

1) Providing an atmosphere of respect for the community
2) Providing an atmosphere of acceptance for the worker by the community
3) Correcting the faulty information
4) Allowing people to express their views, even if they are initially those of opposition
5) Making changes if necessary and adjusting plan realistically

a) Being patient and tolerant of mistakes.

b) Change often takes time and people differ in their flexibility and adaptability to new situations.

METHODS OF MAINTAINING BEHAVIOURAL CHANGE

Support groups:

People with similar problems form a group and meet on frequent basis. These have been very successful in producing and maintaining positive behaviour changes e.g., weight management group, diabetics support group.

Positive reinforcement:

At every step in the process an individual who is struggling to adopt a healthy change, behavioural change should be appreciated. The appreciation can be in the form of incentives, (if available) applaud or even a pat on the back. This is fairly successful in most behaviour changes.

Negative reinforcement:

Here an individual is punished in suitable way if he does not make change in his behaviours or loses the changed behaviour and goes back to the unhealthy life style. This can be in the form of monitory punishment, e.g. taking fine for smoking in smoking cessation programs. It can also be in the form of withdrawing incentives e.g., no maternity leave is allowed after the third pregnancy onwards. This is to-date a debatable reinforcement although it has been widely used in media campaigns (showing a dead man with black lungs for smoking and lung cancer) and other types of health education strategies.

Steps of Behaviour Change

These steps are used to measure audience responses in a wide range of communication programs. These indicators along with others in a survey can provide a baseline documenting where an intended audience stands with respect to public health practices before a program begins. After the program, the same indicators can be used to establish what have been the shifts in knowledge, approval, intension, practice and advocacy of specific health practices among the intended audience. To evaluate the impact of communication program, one can measure how much is the level of the intended audience regarding:

Knowledge

Recall specific messages

a) Understand what messages mean

b) Can name products, methods, or other practices and/or source of services / supplies.

Approval

1) Respond favourably to messages
2) Discuss messages or issues with members of personal networks (family, friends)
3) Think family, friends and community approve of practice
4) Approve of practice.

Intention

1) Recognize that specified health practices can meet a personal need
2) Intend to consult a provider

Intent to practice

Practice

1) Go to a provider for information/supplies/services
2) Choose a method or practice and begins use
3) Continue use.

Advocacy

1) Experience the benefits of practice
2) Acknowledge the benefits of practice
3) Advocate the practice to others

In any type of health education aiming at behaviour change, the first change to be looked for in the communities is the development of health awareness where people want to know what is going on. Once that change is acquired, then the individuals in the community try to gain knowledge through the health messages. This knowledge leads to appreciation of individual's own health status and related behaviours, then the attitude changes and some decide to adopt the behaviour change. Once a behaviour change is made and the health educator knows about it, the most difficult task is that of maintaining that health behaviour.

Health education behavioural change process – examples for various goals

Goal	Smoking Education	Exercise Education
Health consciousness	I know that smoking too much is bad for me	I know that exercise is supposed to be good for health
Knowledge	I know the effects of smoking on me.	I know that exercise aids physical stamina, sleepless-ness and makes the heart stronger
Self-awareness	I am aware that I am smoking too much and I am a bit worried	I feel unfit because I get out of breath easily and I'd like to feel fitter.
Attitude	I know and believe it's important to change my habits.	I used to believe that exercise was only for health freaks, but now, I too, do more exercises
Decision making	I will limit my smoking to one packet a day	I'll join a 'keep-fit' class
Behaviour change	I now smoke less than I used to	I go to 'keep-fit' class and I generally walk rather than take a bus, climb stairs and avoid lifts
Social change	Higher taxation on smoking, Smoking advertisement banned	Sports facilities cheaper and more available.

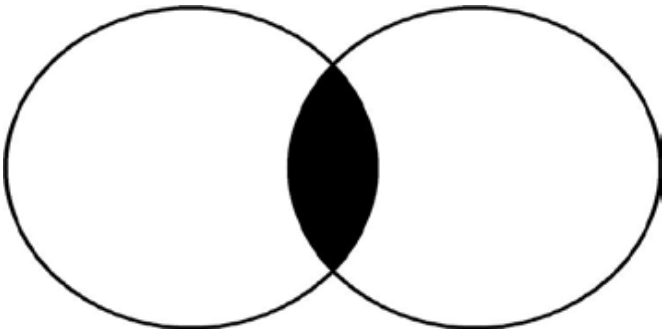
14.11 COMMUNICATION PROCESS CONCEPTS

14.11 COMMUNICATION PROCESS CONCEPTS

COMMUNICATION PROCESS

Communication is a process which is dynamic, ever changing on going, it is not static. Communication involves the transfer and the sharing of meanings. Meanings may be ideas, images or thoughts expressed in symbols e.g., written, oral, music, clothes, smoke, art works, etc. It is important to realize that messages are not inherent in symbols used. Words or whatever symbols we use to transmit our messages have no meanings in themselves, it is the people involved in the communication process who give meaning to these words / symbols.

Let us look at the following diagram, using A and B as two persons engaged in communication:



The area overlapping the two circles represents the shared meanings between the two persons. Bigger the overlap, the more effective is the communication. It is therefore the task of the FWW to ensure that the shared meanings between her and her clients are as “big” as possible.

Communication is not possible without perception

Perception:

Is defined as the process of forming impressions about something (a person, an event or any stimulus that influences our consciousness) and then making a judgment about this. Our perceptions and our judgment are affected / influenced by our senses (i.e., sight, sound, touch, smell and taste).

Visual perception:

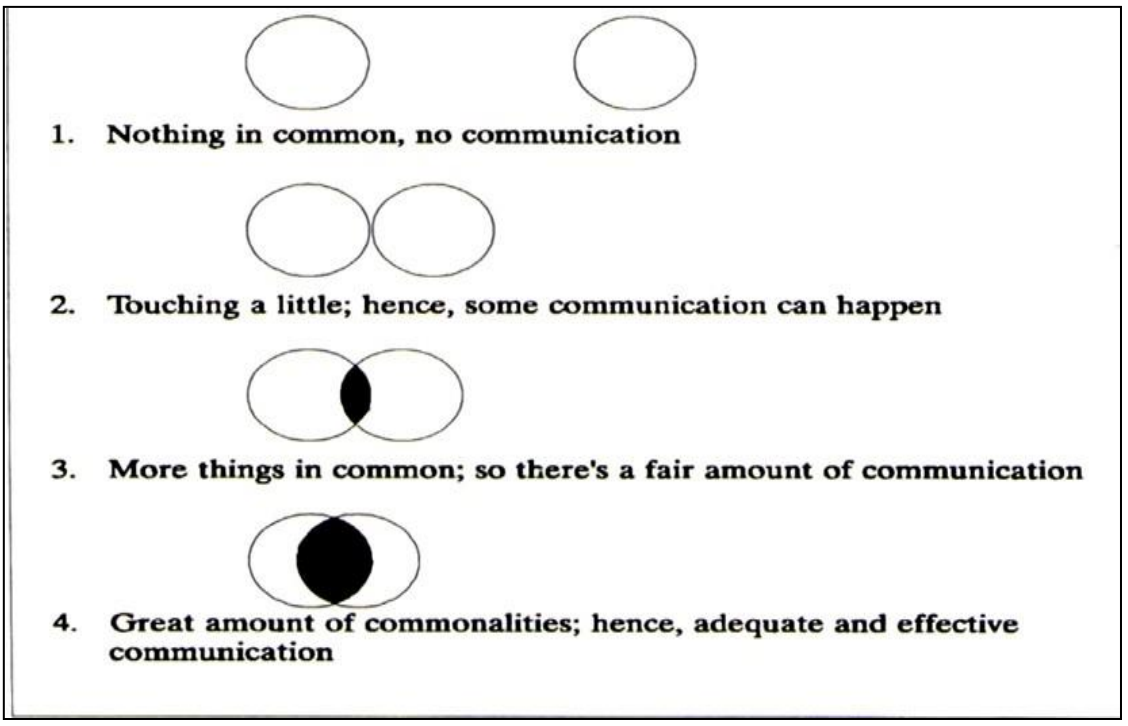
It is the way we interpret things when we see them. When designing the visual aids, it is important to know that because of different life experiences, environment, culture, levels of education etc., individuals are liable to interpret what they see, in different ways from each other.

Thoughts, feelings, and perceptions vary from individual to individual and from group to group. These considerations are very important while making and using visual aids.

The above picture may be interpreted in two ways, what can you see? This can be looked upon as a young lady's profile or an old lady's picture

Degrees of Communication

The following diagram illustrates the degrees of communication, using two circles as two persons engaged in communication.



Source / Sender (Messenger) is the origin of the messages.

The sender of the message codes the message, meaning that whatever language is used; it is referred to as the process of coding. It means that it is the responsibility of the sender to adequately code / phrase the message so that it is at the level of the listener and can be adequately understood. The source is the one who brings the messages of the program to the people. The source also becomes the receiver. There are certain factors to be considered that may affect the effectiveness and credibility of the source as the producer of the messages. Some of these factors include communication skills (e.g., the ability to speak, listen), knowledge of the subject matter attitude towards the subject and audience, behaviour or practice of the subject.

Qualities of Messenger

Clear: The sender should be clear in what she/he is saying meaning in his/her language and framing of the message.

Confident: The sender of the message should do so with confidence and not appear shaky or confused otherwise he/she will do more harm than good.

Creditable: This is still debatable but has to do with relationships as consumers are not willing to listen to a person who does not enjoy good reputation in the community.

Clear concepts: This is important because if a person starts educating with no conceptual background of the subject, then the message will not be received well and the desired results will not be achieved.

Concise message: This is a proven fact that lengthy confused messages are not understood therefore for health education the best message is a short message.

Message is the idea that is communicated.

The message may be a piece of information, entertainment, encouragement, motivation, correction of errors, inquiry into something or it can be the findings of one's probing. The source selects and organizes messages that would be most suited to a particular target audience. For instance, a message to the first-time mothers should not be the same as those intended for the mothers with three or more children.

Many messages are expressed in verbal symbols or language. But messages are also expressed using nonverbal symbols, such as a tone of voice, body movements, hand or facial gestures and pictures.

Qualities of a Good Message

The message should be:

1) Useful and relevant (meeting present needs)
2) Well presented, clear and understandable
3) Related to the customs and beliefs of the people

4) Attractive e.g., with some humour.

Channel

is the means / media by which a message is transmitted from the source to the receiver, for example newspapers, posters, bulletins, radio, television and film etc. These can be selected according to the situation and the availability of the resources, these help in understanding the message more clearly like the use of audio-visuals in health education sessions. Interpersonal channels are those that involve face to face exchange. These channels include face to face conversations, counselling, home visits, community assemblies, small group discussions and lecture. It is possible to get immediate feedback from the audience and through these means it is easier to penetrate the heart and minds of people. Mass media channels are effective in raising awareness and knowledge, as they are capable of reaching many people.

Receiver

refers to the person or persons talked to and who interprets the message being transmitted. The receiver is the target audience.

The receiver decodes the message and then the process of dealing with the message begins. The receiver may like the message and try to make the change in his behaviour or otherwise. For this process to begin, he/she first has to understand the message and that depends upon his/her ability to decode the message.

EFFECTS

Effects are the changes occurring in the receiver as a result of the transmission of the message. Effects are of three main types:

Changes in the receiver's knowledge (e.g., a client's knowledge about a family planning method has improved)

Changes in receiver's attitude (e.g., a husband who was against family planning has been convinced about the value of having a smaller family size)

Changes in the receiver's actions or behaviour.

The purpose of communication is to achieve certain desired results. These desired results or effects might be one of the three changes mentioned above.

Feedback

When these changes or effects are sent back to the source of the communication, they are referred to as feedback.

Feedback refers to the response or reaction given to or received from someone about his / her ideas or actions. Feedback can be seen as a "helping relationship" between the giver and the receiver in terms of increasing or improving mutual understanding. Negative feelings are reported to clarify the situation and make the receiver to reflect on his / her thoughts and

actions, be aware of how it is perceived by others, and if and when ready, choose to improve or change it. Positive feedback, on the other hand, is given to encourage or reinforce good ideas or actions. Both positive and negative feedback should be given when appropriate or necessary.

14.12 COMMUNITY MOBILIZATION

14.12 COMMUNITY MOBILIZATION

Refers to mobilizing individuals or groups within the community to conduct service delivery or carry out educational programs.

Steps to Mobilize the Community

Working in isolation does not produce the desired results therefore, in order to improve the performance to achieve the desired goals we mobilize the community to:

1) Increase community outreach i.e., reach directly and individually with convenient services and accurate information
2) Bring the services to the doorstep of clients
3) Allow sharing / exchange views, beliefs and experiences
4) Remove doubts and fears
5) Clarify misconceptions
6) Convey information
7) Educate people
8) Deliver services
9) Give people a feeling of ownership of the activity/ program
10) Sustain the activity/program

People to be mobilized

The FWW is the source of communication to mobilize the community. She will have to get the co-operation of some leaders of the community in order to establish her credentials, before she can reach the rest of the people. It is wise to approach any women's groups or the village Management Committee or the active community members, to reach out to the following:

1) Community leaders
2) Medical practitioners / health workers
3) Teachers
4) Satisfied clients
5) Friends & relatives
6) Married women of reproductive age / eligible couples
7) Elderly women
8) Female youth
9) Young children
10) Married men in the village.

Ways to Mobilize the Community

There are a variety of ways in which the community can be mobilized but as far as the FWW is concerned she will be utilizing the following types:

1) Interpersonal communication
2) One on one communication
3) Group communication
4) Group Learning Activity (GLA) with Group Discussion (GD)
5) Audio-video aids

IDENTIFICATION OF TARGET GROUPS

FWWs should identify target groups so that they can make appropriate adjustments to the way in which they send their messages and prepare and deliver their motivational talks to ensure effectiveness. Some target groups for purposes of planning health education strategies are;

1) women's groups and organizations,
2) local leaders (formal and informal),
3) mothers-in-law, grandmothers,
4) traditional birth attendants (dais),
5) opinion leaders,
6) school age groups,
7) teenagers,
8) young married people,
9) organized labour groups,
10) all levels of health and family welfare personnel,
11) personnel involved in other developmental agencies, government and voluntary organizations and special "at risk" groups.

AUDIENCE CHARACTERISTICS AND SENSITIVITIES

We can get an idea of how people think about matters which affect their lives, by looking at their overall environmental conditions and circumstances.

Questions which must be considered are:

1) What are the economic conditions of the community?
2) What is the major occupation of the community?
3) Is it a traditional, rural, urban, settled or nomadic community?
4) Is the composition of the community constantly being affected by outside influence?
5) How is information passed among people?
6) What is the level of education in the community?
7) What language do they speak?
8) Who are the decision makers in the family?
9) What is the knowledge, attitudes, practices and preoccupations of the people at the times when health education interventions are being planned

Sensitivities:

Targeting the areas of sensitivities of the audience is always more fruitful than otherwise. For example, when emphasis has to be given to breast feeding the mothers should be informed about its benefits to the child as mothers are sensitive towards the health of their children. The FWW always needs to be sufficiently educated and informed about prospective audiences in order to be able to communicate effectively.

Issue / Problems	What is to be done by FWW	Target Audience
Environmental sanitation	Inform the hazards of unhygienic conditions – the diseases caused by filth, flies and mosquitoes	- Mothers for sanitation within their home - Community or leaders for sanitation outside homes
Clean drinking water	Teach how to make water safe for drinking	- Mother / Housewives or community leaders for source of clean water

Food hygiene	Advice on buying fresh foods and proper storage of cooked food	- Mothers /House wives
Nutrition education	- Education on low-cost nutritious foods - Food distribution within family, share given to pregnant and lactating mothers, share given to growing children Weaning - Demonstration on preparation of weaning foods - Growing vegetables at home - Kitchen gardening	- Mothers /House wives

14.13 METHODS FOR HEALTH EDUCATION

14.13 METHODS FOR HEALTH EDUCATION

METHODS OF TEACHING

Different methods of teaching are used for the purpose of health education according to the objective / situation and size of the target group.

Teaching method		Criteria for using the method
1.	Lecture	Large group (50-100 persons)
2.	Brain storming	Small group (5-20 persons)
3.	Discussion	Small group (2-10 persons) (to know and exchange knowledge and ideas)
4.	Case study	Individual or small group (problem solving activity)
5.	Demonstration and Practice	Small group (when a teacher feels it is necessary and relevant materials are available)
6.	Role playing	Small group (conveying inter-personal communication)
7.	Interviewing method	2 persons or more (face to face conversation between two or more people)
8.	Simulation	Small group (classroom experience by replicating condition of a real event)
9.	Field visit	Small group / large group (a pre-planned visit to carry out a study)
10.	Story telling	Small group / large group (transferring new or different ideas and relating them to local behaviour)
11.	Counselling	One-on-one communication/ couple communication

12.	Games	Small or large group depending on the game (training procedure)

LECTURE

An organized presentation with or without visuals aimed to share knowledge, experience, events, facts, concepts and principles.

Uses:

- It is effective for sharing knowledge and experience with the group
- Suitable for large number of trainees. Application of any other method will pose the problem of time management
- Lecture involves sharing new information with the group
- There is a comparative advantage in using the lecture format when knowledge and experience of the lecture is greater in relation to group knowledge and experience.

Advantages:

- It is an effective tool for presenting & explaining ideas, concepts, theories, principles etc.
- It is time saving. The trainer can cover a wide range of subject within a short time
- It can serve large group of trainees
- The trainer can use it in conjunction with other methods such as group discussion, exercise, short cases and audio-visuals
- The process is controlled by the lecturer to convey specific information.

Limitations:

- The trainees remain passive and uninvolved
- Does not help in preparing training trainees to solve real life problems
- Trainees cannot remain alert for long periods of time when not involved
- Short term retention of knowledge if the trainees just listen to the lecture
- Does not allow for individual pace of learning

Types

The Formal Lecture

A formal lecture (or talk) consists of presentations, clarifications of facts and principles. The trainees remain passive most of the time and get disinterested soon.

The Illustrated Lecture

An illustrated lecture is that in which the trainer uses audio-visual aids in addition to verbal explanations. The trainees remain passive. If illustrations are used effectively, trainees get interested and retention span is greater than the formal lecture.

BRAIN STORMING

It is a technique of generating ideas or a variety of solutions to the problems. It is best used with a group of 5 to 20 trainees. It helps to increase the range of factors taken into account in reaching a decision.

Uses:

- Generate ideas
- Build analytical skills
- Build decision making skills
- Build communication skills.

Advantages:

- Many people are thrilled at the freedom of expression inherent in brainstorming
- Solutions to previously unsolved problems can be discovered
- All members of the group can be encouraged to participate.

Limitations

- Many individuals have difficulty in getting away from practicalities
- Many of the suggestions made may not be worth anything

DISCUSSION

It is an activity in which participants interact in sharing views and solving problems, using their reasoning powers.

Types

There are two types of discussion:

Formal

(Plenary) group discussion in which the trainer leads and controls the discussion in a structured way according to certain rules of order.

Guided Discussion

Where members informally discuss a topic or ways to solve a particular problem.

Uses

- Involves trainees as active participants in the learning task rather than just passive
- Helps trainees and trainers to get to know each other
- Develops skills in teamwork and cooperation
- Provides practice in applying knowledge to solving problems individually in the group
- Encourages trainees to examine new attitudes and ideas
- Provide opportunities for trainees to have close contact with the trainer which helps trainees to check out any information that they are not sure of.

Advantages

- Allows the sharing/exchange of ideas and experiences
- Develops reasoning powers
- Develops objective thinking
- Promotes respect and acceptance for other people's ideas and opinions
- Allows maximum participation of trainees
- Gives trainees confidence when their ideas are accepted by others allows the trainer to assess the attitudes and knowledge trainees have on a subject
- Develops attitudes and personality traits
- Fosters consideration and cooperation
- Develops reflective thinking. This means that a person learns to review his/her line of thought in the light of new knowledge gained during the discussion.

Limitations

- Can be noisy and unruly if not managed well by the trainer
- Time consuming; the time spent on a discussion might not be worth the results achieved
- Uncomfortable for the trainees if their ideas are attacked and criticized
- One or two trainees can dominate the session and hinder participation of others
- If the group leader is weak and does not keep the discussion relevant it can be waste of time for all concerned
- If the group leader is dominant then sharing of views does not take place.

CASE STUDIES

Case study is a learning activity that uses real life scenarios focusing on a specific issue, topic or problem. Trainees typically read, study and react to the case study individually or in small groups.

Uses:

- For recognition of problems
- For analysis of problems
- For thinking about various solution
- For exploring and changing attitudes
- Used in clinical teaching.

Advantages:

- Focuses on real life problems or situations
- Develops problem solving and decision-making skills
- A participatory teaching method that actively involves and encourages trainees to interact
- Trainees react to realistic and relevant cases that relate directly to the course and often to their future work
- Case study provides different perspectives and different solutions to problems
- Provokes critical thinking skills
- Analyzes the issue so analytical skill can develop
- Synthesizes skills develop
- Captures trainee's attention
- Challenge for the trainer
- Ensures deep learning.

Limitations:

- Needs skillful writer
- There is tendency for the leader to dominate the group
- Requires knowledge and skills to use case study as a teaching method
- May frustrate others because there is no right answer.

DEMONSTRATION

Demonstration is a presentation in which the trainer explains and exhibits the steps involved in a task or procedure.

Uses:

- To provide first-hand experience of a procedure or event this cannot be adequately described by words alone
- To give an overview of a procedure or task before the trainees begin to practice it
- To set up a problem for trainees solve. For example, the trainer might demonstrate

a client's limp and ask trainees to work out the possible anatomical cause of the limp.

Advantages:

- Activates many senses, hence better retention
- Correlates theory with practice
- Clarifies principles and concepts
- Develops observation power
- Enables logical step-by-step presentation of facts and actions
- Facilitates the acquisition of practical skills
- Demonstrates an organized and correct way of doing a task.

Limitations:

- Depends upon the skill of the trainer in performing a procedure or a task
- Not very effective with large groups
- Its time consuming
- If not followed by prompt practice it is a waste of time.

Guidelines for Demonstration:

- Write down the steps of the demonstration in their correct sequence and a list of materials needed
- Prepare materials and check if they are in working condition (e.g., syringe for giving an injection to a client)
- When objects are used arrange them in the order in which they are going to be used i.e., the object to be used last is at the bottom
- Ensure that all trainees can see and hear (if overhead projector is being used, the words should be clearly legible)
- Explain beforehand what is to be demonstrated. If making something e.g., a doll, or preparing oral dehydration solution, or a curriculum, show actual finished product or a picture of it. The trainees can then clearly visualize the end result
- For skills being demonstrated, give a running commentary: explain each step while demonstrating it and use the checklist
- Recapitulate. Summarize & discuss. Where people are used for demonstrating a skill, the discussion can be held later
- Ensure practice by one or more trainees. This is known as "return demonstration".
- Arrange for prompt supervised practice of the skill being taught using the checklist.

ROLE PLAY

It is an unrehearsed acting of a particular situation or problem, with the aim of developing

skills in handling situations or seeking possible workable solutions.

Uses:

- To provide initial practice for certain skills before working in a real-life situation
- To provide supervised practice for a real-life situation for learning
- For demonstrating different approaches in handling a situation
- For demonstrating solutions of different types of problems.

Advantages:

- Helps trainees to develop the skill of 'on-the-spot' thinking
- Lets trainee explore and practice various approaches to solve problems
- Helps to develop communications skills
- Allows constructive feedback from trainees and trainers
- Helps learning enjoyable. It is a fun-learning activity
- Brings out different attitudes and abilities of the participants.

Limitations:

- It is time consuming
- Can be used for real life situations only
- Is dependent on individual trainee's efforts
- It is not suitable for all topics.

Guidelines:

- Define objectives clearly
- Briefly write down description of the situation/problem and various approaches or possible solutions
- Write down characteristics of the individual actors i.e. role/description of the persons being portrayed
- Checklist/statements to be discussed after the role-play.

INTERVIEWING METHOD

It is a face-to-face purposeful conversation between two individuals.

Purpose:

Receiving and giving information to:

- Determine strengths and weaknesses of respondent's thinking and practices
- Suggest correct ways of doing things

- Plan a course of action in the light of the information received
- Assess and verbally evaluate the outcome of learning
- Solve individual problems.

Major factors influencing an interview Skills of the interviewer:

- Asking questions tactfully
- Answering questions politely, patiently and honestly
- Listening with patience and concern
- Analyzing vocal or silent responses of the respondent.

Positive Approach

- Respondent should feel that
- Interviewer is trying to help her
- The discussion is based on facts
- Due respect as an individual is given
- It is not a fault-finding session but a face to face honest and useful interaction.

Guidelines for interviewing skill

No prepared recipe is possible in principle. Following are the guidelines:

Provide privacy and courtesy

- Help the respondent to feel relaxed and comfortable:
- Offer her a seat and ask about her family
- Pay a genuine complement about her appearance, response
- As about a general happening
- If respondent does not know already, inform about the purpose of interview after two or three minutes of general conversation
- Make notes of responses for future reference
- In problematic situation, find the cause and provide guidance.

SIMULATION

A simulation, which may take various forms, is aimed at creating reality under controlled classroom conditions. It is a dynamic case study that attempts to replicate the conditions of a real event so that participants in a training program can experience it in a “controlled” way.

Uses:

- This technique is useful for training in:
- Management concepts

- Decision making
- Team building
- Problem solving
- Executive management training.

Advantages:

- Participants experience different shades of reality
- It promotes action learning
- Simulations have dramatic and demonstrative effects
- It can make principles and theories a living experience.

Limitations:

- Artificiality of the situation is quite obvious
- It involves simplification of reality
- It may be more entertaining than educational
- Highly skilled trainers are required to run simulation sessions.

14.14 USING LEARNING AIDS IN TEACHING AND LEARNING

14.14 USING LEARNING AIDS (TEACHING AND LEARNING MATERIALS) IN HEALTH EDUCATION

Definition of Learning Aids

AV Aids are useful tools which help the speaker in conveying and emphasizing the message to the audience and can be in the form of a movie, overhead projector, graphs, charts and tape recorder /player etc. Each aid utilized should be simple and clear, and must meet certain criteria; otherwise, it should not be utilized

Criteria of AV Aids:

1) Emphasize the message. It should be specific
2) Amplify the point being made in the speech / talk
3) Make the key points more clear / understandable
4) Be visible, audible and in working order
5) Serve as an adjunct, not replacement
6) Be clear and understandable
7) Be used adequately and correctly.

Multimedia approaches are the most effective

Learning aids are materials or equipment used to facilitate the exchange of information and ideas. Learning aids affect the use of a combination of two or more of the five senses: touch, sight, smell, feeling and taste to facilitate the acquisition of knowledge and sharing of experience as they create awareness about diseases and health issues. Any presentation or approach should be:

1) Attractive
2) Informative
3) Persuading
4) Stimulating
5) Entertaining

Commonly used AV aids are

1) Writing Board
2) Flannel Board
3) Flip Chart
4) Flash Card
5) Display Board
6) Poster
7) Print Handouts

8) Pictorials

Advantages and Disadvantages of Different Audio-Visual AIDS

MEDIA	ADVANTAGES	DISADVANTAGES
Audio-Visual	•Appeals to more than one of the 5 senses and increases understanding - Ensures consistency of messages - Promotes humour - Enhances retention - Promotes attentiveness - Helps control nervousness	• Operates on electricity, therefore cannot be used in areas without electricity • May require additional equipment • Equipment may break down frequently - High cost - Requires skilled persons to operate
Audio	•Enhances participation - Can reach wide audience - Can use various formats - Can be persuasive • Relatively low cost for user - It is portable	• Higher cost for good production requires: - Electricity or batteries - Skilled person o work
Visual	•Less costly to produce - Can include more information - Can enhance participation	•High cost if using colours - Does not hold attention - Tendency to rely on written word - Easily forgotten about or misplaced

WRITING BOARD

The writing board is used in group learning setting such as classrooms. Plastic white boards on which marker pens are used are becoming popular. It is one of the easiest means of illustrating a point, erasing it or adding to it.

Useful Tips:

1) Divide the board into two parts – one part to list the main points of the lecture / discussion which will serve as guide / cue, the other part for constant writing / illustrating in the course of your discussion.
2) Write words in bold print, not longhand.
3) Use colored marker for writing words that need underlining.
4) When writing short points or phrase, write sideways on the board, with the left side of your body partly facing your audience so as to maintain eye contact, and also that they can follow what is being written.
5) Lengthy topics (e.g., summary of lecture, assignment lists, paragraph lengthy points etc) should be written in advance of the lecture or discussion period, to save time.

Cover them with a pull-across cover or newspaper until they are ready to be used.

FLANNEL BOARD

The flannel board is a fairly large, portable board covered with flannel, felt, towel-cloth or sack cloth for illustrative material e.g., cut outs, symbols, photographs, figures or labels which have “stick on material” like sandpaper on their backs to stick them on. It is a communication aid used in group settings.

Useful Tips:

1) Use it to present what may otherwise be a dry subject or technical data (e.g., statistical data, formulas, figures, etc.)
2) In presenting the above materials, ensure that they can be made to look interesting, use different colors, shapes, sizes and forms on the flannel board.
3) Ensure participation of audience in using the flannel board.

FLIP CHART

The flip chart is a portable visual teaching aid made up of a series of flaps to present ideas sequentially to a group of people. Each chart carries a specific or focal illustration, which usually has text indicating the meaning of the illustration.

Useful Tips

1) Plan your talk, assisted by illustration on the flipchart, this exercise can be used creatively. Examine each chart and plan, where you can use storytelling, humor, and research based on facts etc.
2) Be sure that the charts are properly sequenced before the presentation.
3) Reveal charts only when you are ready to discuss them.
4) Talk to the audience, not to the flipcharts.
5) Use a pointer to indicate certain details in a chart; do not use your hand so as not to cover the rest of the illustration.
6) Position the charts in such a way that they can be viewed clearly and comfortably by the audience.
7) Be sure that the flip chart is securely fastened and can be flipped easily, so it can be handled smoothly, without long pauses in the presentation.

FLASH CARDS

Flashcards are cards, which carry a simple illustration, a picture or a few printed words. They are shown to one person or a group of people as a spur to discussion.

Useful Tips

1) Be creative when using flashcards. Just as with a flipchart, examine the contents of the flashcards and decide to present singly, selectively or as a series. A story can be

told with just one card or with a set of cards. An objective, factual approach can be portrayed by using flash cards.

2) Ensure participation while using flashcards. Some flashcards are designed primarily with illiterate people in mind. They have high visual approach to convey the message. When using such flashcards, invite interpretation or explanation of the card from the people in order to assess if the message is understood, clearly interpreted, and can be supplemented by providing necessary facts which the person may fail to relate to the message on the card.

DISPLAY BOARD / KITS

The display board is fixed or portable and made to hold materials for display. For interpersonal communication support purposes, the display board may carry materials to inform, motivate or instruct clients.

Useful Tips

1) It is convenient to carry a display board / kit which holds samples of different FP methods for display.
2) The display board / kit can be modified according to the aim in bringing about a change in the learning of the clients (e.g., study of menstrual cycle for those using natural method of family planning).
3) In a group setting, display to create environment which should not seem drab or boring. The display should, of course, be related to the theme to be discussed.

POSTERS

Posters can also be used to make counselling and group discussion more effective. There are many agencies that can provide posters on different subjects.

Posters can also be made very easily by cutting photographs from various sources e.g., calendar, magazines, newspapers and gluing them to art paper and writing short messages under the picture.

Useful Tips

1) The title should be instantly understood.
2) It should have an emotional appeal.
3) Has a realistic picture, which is better, understood than symbolic picture.
4) It carries a single, simple message.

PRINT HANDOUTS (COMICS / BROCHURES / LEAFLETS)

The comics, brochures, and leaflets are the most popular types of handouts given to program clients. The comic is the most popular form of mass literature. It features illustrated scripted stories.

Leaflets are usually the one-page folded type of printed materials in variable sizes, shapes

and styles. Leaflets carry short, brief, summated messages about person, idea or activity being promoted (health tips, sanitation drive, baby products etc.).

Brochures (like leaflets) are also briefing materials but have more pages (usually not less than 4-5 pages). Brochures give more comprehensive information, and these handouts can either reflect informational, motivational or instructional messages or a combination of the three.

DO'S AND DON'TS IN HEALTH EDUCATION

There are certain "**Do's**" and "**Don'ts**" that FWW needs to follow in conducting health education session; dos refer to things she should do, don'ts to those things she must avoid. The Do's are covered under the following eight points.

Do: communicate well with people

1) Listen
2) Share ideas
3) Receive ideas
4) Understand behaviour
5) Share, give and receive information.

Do: learn the skills needed to work with other people

1) Listen to what people say
2) Understand people's problems
3) Share ideas
4) Support and help people
5) Find ways to solve problems together
6) Learn from mistakes
7) Learn from each other.

Do: identify people in the community who can help you such as

1) Local counsellors
2) Satisfied clients
3) Community volunteers
4) Local leaders
5) School teachers
6) Government workers
7) Incharge of health outlets
8) Hakims

9) NGOs
10) Dais
11) Imams of mosques.

Do: explain your health topic to them.

For example, if you want to talk about immunization, explain

1) Dangers of childhood communicable diseases
2) Importance of getting vaccines
3) Immunization program
4) Accept their suggestions & discuss the feasibility
5) Reach an agreement.

Do: ask their advice on how to solve problems

1) Ask people when is it convenient to bring children for vaccination
2) Request their help in arranging a session-when, how & where
3) Ask who can help in arranging resources.

Do: be polite and friendly

1) Group is made to sit comfortably
2) Sit with people according to their customs either on charpoys or on the ground etc.
3) Try to make people feel that you are one of them
4) Treat everybody equally
5) Be reliable and punctual.

Do: teach in interesting ways

1) Use simple language (the language of the people to whom you are talking)
2) Do not use medical terms such as immunization
3) Talk for a short time, then ask people their opinion (asking questions so as to appear like an examiner should be avoided)
4) Use teaching aids – posters, flip charts, etc.
5) Listen to what people say about the subject discussed
6) Encourage people to tell about their experiences.

Do: plan what you want to teach

1) Make a list of the ideas that you want to teach
2) Teach one idea in one session

3) When you have finished the list, go back to the beginning and start again (there may be some new people in the audience by then)
4) Make sure that you know what you will teach
5) The list helps to decide on important ideas and not to miss some of them
6) Try to follow the list made.

DON'TS

1) Don't be scared of questions
2) Don't worry if you do not always know the answers, tell them that you are not sure of the answer, but will find out
3) Don't give wrong information
4) Don't use language, which people cannot understand
5) Don't wear clothes that are unacceptable to the people.

MICRO-TEACHING

It is a method to deliver complete, short but comprehensive information to achieve the objective of training in a given time.

Guidelines for Micro-teaching

- Plan a ten-minute teaching session
- Follow the Seven steps of micro-teaching

Select a topic module or a general topic of interest

Examples:

- Advantages of rationalized family norms
- Importance of breastfeeding
- Use and importance of cellular phones
- Importance of training of trainers
- Role of television in popularizing use of contraceptives
- Make a lesson plan in a form that you can follow while teaching
- Define the objectives that can be covered in 10 minutes
- Select the appropriate teaching method and teaching aid/s
- Collect the necessary materials
- Think how learning of the trainees will be ensured
- Rehearse with a friend or colleague

LESSON PLAN

It is the trainer's guide / blueprint for a teaching session. It helps the trainer to plan the sessions in a stepwise structured way**.**

Purpose

- It eliminates the need for dependence on memory
- Ensure proper sequence and organization of teaching activates
- Gives confidence to the trainer to have available "things to do" in writing
- Provides guidelines for preparation of support material beforehand e.g., Audio / Visual aid, equipment for demonstration etc.

Serves as a record for later evaluation of both teaching and learning activities

Format of Lesson Plan

Title of Topic: _____

Duration: _____

Learning Objective: _____

(A **learning objective** is a clear precise statement which begins with an action verb and states what a learner will be able to do at the end of the training session e.g.

After the completion of training, trainees will be able to: -

- Demonstrate the standard infection prevention practices.

Lesson Plan	Methodology/ Activities	Duration	Resources
Introduction			
Contents (Main			
teaching points)			
Summary			
Assessment			
Follow-up Activities			

CHECKLIST

It is a list of the steps, given in the correct sequence, that are needed to perform a skill correctly. e.g.

		Yes	No
1.	Selects middle finger of left hand	_____	_____
2.	Cleans the finger with spirit	_____	_____
3.	Waits for the finger to dry	_____	_____
4.	Pricks the finger with the needle	_____	_____
5.	Allows blood to flow freely after pricking	_____	_____
6.	Puts a drop of blood on the glass slide	_____	_____
7.	Spreads the blood by using end of another slide	_____	_____

14.15 DEALING WITH SENSITIVE ISSUES

14.15 DEALING WITH SENSITIVE ISSUES/SPECIFIC GROUPS

Services for Clients with Chronic Health Problems:

Clients with chronic or serious health problems need access to safe and effective contraception. Providing an appropriate contraceptive method for these clients can be complicated since the health condition may limit the contraceptive choices. The counsellor must know about possible interactions among medical conditions, drugs, and contraceptives, and must be able to provide appropriate counselling. Women who have chronic or serious medical conditions may need medical follow-up and monitoring more often than other women.

In balancing the needs and desires of the client, counsellors must consider that, for women with serious health conditions that make pregnancy dangerous, providing no contraceptive method would be even more dangerous than providing a method with minor side effects. Issues of mentally handicapped clients also need to be addressed through proper counselling of their spouses and family members.

Contraception for HIV-Infected Women:

Women infected with HIV face a variety of RH decisions involving their desire for pregnancy, their contraceptive practices, and choices and decisions if an unintended pregnancy occurs. HIV-infected women should be allowed to make these decisions freely. Voluntary FP can give these women more control over their reproductive lives and serve as a strategy to prevent perinatal HIV infection. Follow the MEC Wheel 2015 in decision making.

Male condoms, used consistently and correctly, are effective in preventing HIV transmission if either husband is infected with HIV. Female condoms also offer significant protection from Sexually Transmitted infections, but their use has been limited by cost and user acceptability. Other methods of contraception such as hormonal contraceptives and IUCDs are effective in preventing unplanned pregnancies, but do not prevent HIV transmission.

Special Needs of Young Women:

Young and adolescents are a specific group requiring sensitive attitude and care. Generally, they have poor access to health care and especially so for reproductive health issues. There are many taboos surrounding gynaecology problems in young girls and even menstruation.

Special Needs of Abused Women:

Abused women clearly have special needs, including medical, psychological, and legal support, and safe housing for themselves and their children. To be effective, solutions must acknowledge the whole problem. Health care planners and other health care providers are in an excellent position to intervene because they represent one of the few institutions to come in contact with most women during their reproductive lives, the time of highest risk for domestic violence.

FP providers must be aware of power imbalances and the resulting health effects. They cannot do their jobs effectively without being concerned about how the issue of power affects women's reproductive health. The most important contraceptive service for women in violent relationships is counselling, which must include recognition of the client's difficulties with her

husband and help in choosing a method that will not make those difficulties worse. Ideally, it will include referral or in-house professional counselling regarding violence issues and the resources available in the community.

Battered women who cannot protect themselves from STIs through condom use may need repeated screening and treatment for STIs. Emergency contraception is also a pressing need for many battered women.

Counselling Men:

Men have special counselling needs and should receive special attention from health care providers to motivate them to make responsible choices regarding RH practices.

Men's Special Counselling Needs:

1) Men should be encouraged to support women's use of FP methods or to use FP methods themselves.
2) It is important to talk to young men about responsible and safe sex before they become sexually active.
3) Men often have less information or are more likely to be misinformed about FP methods, male and female anatomy, and reproductive functions because they tend to talk less about these issues than women.
4) Men are often more concerned about sexual performance and desire than women.
5) Men often have serious misconceptions and concerns that FP methods will negatively affect their sexual pleasure and/or performance.
6) Men are often concerned that women will become promiscuous if they use FP.
7) Many men do not know how to use condoms correctly. Health care providers should always demonstrate correct condom use, using a model when possible.
8) Men are often not comfortable going to a health facility, especially if it serves women primarily.
9) Encourage men to participate in FP. Involving men can be crucial to a continuing client strategy. Men are more likely to support continued contraceptive use when they participate. Group Counselling in ‘Mohalla” meetings could be good forum for engaging men in FP.

Counsellors can involve men and serve them better if they take four steps:

1) Offer men FP and other RH services.
2) Provide men with accurate information about FP.
3) Explain how women can assure their own RH as well as that of their husbands
4) Encourage couples to talk to each other about FP, as well as talking to health care providers.
5) Counsellors can often encourage women to talk with their husband about practicing FP and sharing decision-making by appealing to their sense of responsibility in family matters.

14.16 EVALUATION OF HEALTH EDUCATION

14.16 EVALUATION OF HEALTH EDUCATION PROGRAMMES

Evaluation is the process of inquiry into the performance of a program

Evaluation can be broadly divided into 2 major portions:

Formative:

Formative evaluation is the process that goes on throughout the implementation phase of the program. It is very important as major changes might be made in the program during implementation based on result of formative evaluation.

Summative:

This is the formal evaluation done at the end of the program.

Evaluation takes place at different levels as we see from the broad classification. If we look at it from the beginning of the programs, then following levels of evaluation have to be there:

Level 1:

Activity i.e., to see program is going on e.g., classes being held, participants etc.

Level 2:

Meeting minimum standard prescribed in the strategies of the program

Level 3:

Efficiency of operation i.e., how well the operators are managing the program.

Level 4:

Effectiveness i.e., how well the recipients are absorbing the health messages or the program is producing the desired results.

Level 5:

Outcome validity i.e., the extent to which the program is successful in dealing with the community health problems for which it was designed.

Level 6:

Overall appropriateness i.e., how well the program fits with other similar programs and the extent to which the goals of the program are “good” for society.

All these levels may not be evaluated in some programs, as evaluation at some levels may be enough for any program. most community health education programs are evaluated at all levels informally even though the focus of formal evaluation may be only a few levels.

Module II

REPRODUCTIVE HEALTH PACKAGE

An Essential Element of Universal Health Coverage

World Health Organization