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CHRISTIAN RELIEF & DEVELOPMENT ASSOCIATION

TRAINING PROGRAMME ON SAFE MOTHERHOOD

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November 3 - 13, 1997
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Comprehensive Reproductive Health

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

- Have satisfying and safe sex life
- Capability to reproduce
- Freedom to decide when and how often to do so
- The right of men and women to be informed and have access to safe, effective, affordable and acceptable methods of FP. of their choice.
- The right of access to appropriate health care services to go safely through pregnancy and child birth.
- STD, HIV/AIDS, Abortion, /Prevention and Management
- Cancer, harmful practice
- Violence, infertility, malnutrition
- Lack of information means lack of improvement (IEC and rehabilitation service.)

Some services are available; some where:-

For FP
For maternal and new born care
For HIV/AIDS Prevention
For STD (less extent)

But they function separately and provide poor quality services (SMHNA).

There is a need for strengthening

- Linkages across programmes
- Working with partners (NGOs) and other sectors, social and education.
- Integration of service (suited local needs cot-effective).
- Assessing the gaps of on going programmes.
- Maternal mortality is a symptom of the underlying neglect of women's health and well-being.
- Deaths during pregnancy and child birth are almost entirely avoidable with existing skills and technologies 9/10 yet service to provide appropriate maternal health care and safe obstetric interventions are not universally available.
- Skill maintenance, adequate supply, staff motivation.
- An MMR over 100/100,000 L.B. shows serious deficiency in maternal health care.

All women should have access to high quality of prenatal, delivery and postpartum care in the concept of PHC including access to referral services for obstetric complication.

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F.P. service should provide information, education and universal access to the full range of safe and reliable methods.

Focus on enabling people to make informed choices about timing, number and pacing of their children.

Empower women to manage their own fertility.

Emphasize men' responsibility in healthy sexuality and reproductive health F.P.

Information and services should be improved to respond to the unmet need of F.P.

In General RH :

. Responds to people's need
. Should involved people in programme formulation, implementation and monitoring.
. Strong feeling of ownership established.
. It seeks sustainable programme and action.
. Have greatest impact for most people at an affordable price.

Guiding principles of reproductive health and those :-

. of human right
. Ethics
. Equity
. Quality of Care
. Participation
. Partnership
. Integration
. Optimal use of resource and sustainability

RH Operational Principles

* Country strategies and priorities to be determined by Nations.
* Involvement of health care users, providers and planners.
* Participatory consultation in planning and programme development.
* Multi sectoral action with key patterns.

RH. It is not possible to do everything immediately and to do it all well. Counties must instead identify their main concerns using a participatory and community based approach and must direct their efforts towards a few priorities and toward accomplishing them well.

The attainment of reproductive health will require accessible and acceptable quality services and technologies, the participation of other agencies in the judicial, economic educational and social sectors and equity between sexes.

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The reproductive health component of general health increase during adolescence and, particularly for women, during the reproductive years. In old age although general health continues to reflect earlier reproductive life events.

Reproductive health affects and is affected by the broader context of people's lives, including their economic circumstances, education, employment living conditions and family environment, social and gender relationships and the tradition and legal structures within which they live.

Poor reproductive health is associated with disease, abuse, exploitation, unwanted pregnancy and death.

The empowerment of women is therefore an essential element for health.

Sustainability - Not in directory

Continuation of a programme without donor financial assistance.

Technical, Financial and managerial self-reliance to continue programme mission.

* Benefits to community at a steady or increased level while increasing local earnings.

A vision is something to be pursued, while a mission is something to be accomplished.

Vision is the overall direction of the organization.

Mission	What is the purpose ? What services is it providing ? Whom is it serving ? Where is it serving ? How is it providing services ? How is it funded ?

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Baby Mother Package

- A Technical tool for the reduction of maternal and neonatal mortality and morbidity (WHO and collaborating agencies).

- MCH - Component of PHC

- Safe motherhood Initiative - with focus on maternal mortality reduction and essential obstetric care.

Justification for the Mother-Baby Package

. Very high maternal mortality rate
. Very high neonatal mortality rate
. Every year 200 million pregnancies occur world wide.
. More than 15% require skilled Obstetrics care.
. More than 1/2 a mission women die (99% is developing counties >30% in Africa) from complications of pregnancy and related factors.
. More than 20 million women suffer illness and life long complications.
. 9 out of 10 maternal deaths in developing countries can be prevented using knowledge and technology that has been available for decades.
. Infant mortality is 9 times high in low income countries, than in high income countries.
. Factors that are related to maternal mortality : Medical, social, economical and cultural.

The most important immediate cause of maternal death is the lack, inadequacy and under-utilization of the existing health care unit.

The main medical causes of maternal death

- Hemorrhage	25%
- Sepsis	15%
- Hypertension disorders of pregnancy	12%
- Obstructed labor	8%
- Abortion	13%
- Disease aggravated by pregnancy such as malaries, Iron deficiency, amimia, hepatitis, Tuberculosis and heart disease	20%
- Others	7%

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Common Complications and Disabilities due to Problems of Pregnancy and Delivery

- Anemia
- Reproductive tract infections
- Obstetrics fistulae

Why is the material mortality rate 50 different in low-income and high in-come countries?

1. Strong tradition or Pro-Fertility and pro-sexuality.
   - 1st child too early during tee age
   - Last child is delivered near the menopause
2. High frequency of Anemia due to malaria, hookworm, deficiency diet. If Hb is under 30% MM due to eclampsia is 5 times high
3. malnutrition during childhood and puberty which increases cephalopelvic disproportion
4. Frequent pregnancy due to lack of FP services
5. Poor transport facilities for moving pts
6. No possibilities of blood transfusion
7. poor hygienic condition during traditional delivers
8. Illegal Abortion

Common Cause of Neonatal Death

- Birth asphyxia*
- Birth injuries
- Neonatal tetanus
- Sepsis
- Pneumonia/hypothermia*
- Diarrhea
- Prematurity
- Congenital anomalies

Problems that causes maternal death and disabilities are those that also cause neonatal death and disabilities, in most cases.

ex. Hemorrhage in mother, asphyxia and still birth.

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Hence, the same strategies benefit both mother and babies.

Interventions are needed to address the various issues.

- Health care
- Nutrition, income & education
- Status of women/equity

- Immediate impact
- Medium term impact and education
- Long term impact

The Mother-Baby Package:

A set interventions that contains minimum health care that should be made available for every expectant mother and her newborns(s)

It takes into account the principles underlying PHC such as;

- interventions must be based on scientifically sound and valid methods,
- equity of care,
- services to be available at the lowest level of the health care system,
- redistribution and decentralization of resources,
- community involvement,
- cost effect and sustainable interventions

Goals:

- Reduction of material mortality to half of the 1990 levels by the year 2000 and reduction in maternal morbidity.

- Reduction of prenatal and neonatal mortality rate form the 1990 level by 30-40% and improvement in newborn health.

Objectives of the Mother-Baby Package:

Promote family planning to reduce the incidence of unwanted and mistimed regencies.

1. To prove basic maternal care to all women
2. To promote, protect and support early exclusive breast feeding
3. To reduce anemia in pregnant women
4. To reduce STD's in pregnant women
5. TO reduce maternal deaths due to complication of abortions
6. To reduce maternal hemorrhage and prolonged/obstructed labor
7. To reduce maternal deaths due to puerperal sepsis
8. To eliminate neonatal tetanus
9. To reduce neonatal death due to birth asphyxia
10. To reduce neonatal deaths due to neonatal hypothermia
11. To reduce ophthalmic neonatorum

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Mother-Baby Package Interventions:

1. Before and during pregnancy;-

   - Antenatal registration and care,
   - Treatment of existing conditions (ex. malaria, hookworm),
   - Advice regarding nutrition and diet,
   - Iron/folate supplementation,
   - Recognition, early detection and management of complication (ex. eclampsia/pre-eclampsia, bleeding, abortion, anemia).

2. During delivery:-

   - Clean and safe (atraumatic) delivery,
   - Recognition, early detection and management of complication in health center or hospital, (ex. hemorrhage, eclampsia, prolonged/obstructed labour).

3. After delivery;-

   3.1 Mother

   - Recognition, early detection and management of postpartum complications. Postpartum care (promotion and support to breast - feedings).

   - Family planning-information and service STD/HIV prevention and management

   3.2 Newborn

   - Resuscitation
   - Prevention and management of hypothermia
   - Early and exclusive breast - feeding
   - Prevention and management of infections including ophthalmic neonatorum and cord infections.

The Mother - baby Package:

- Not a new programme
- Not a vertical programme
- It is to strengthen maternal and newborn care within the already existing health infrastructure
- Based on the strategies of "the four pillars" of safe motherhood.

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- Family planning
- Antenatal care
- Clean/safe delivery
- Essential/emergency obstetric care

- Through primary health care
- Will rest on foundation of greater equity for women

Mother-Baby Package:

- Most material deaths have the same causes,
- Most pregnancy complications can be prevented or treated
- Safe motherhood benefits babies too
- Safe motherhood is attainable,
- Goals and objectives
- Family planning
- basic maternity care
- Prevention, early detection and management of complications

Operationalizing Mother Baby Package

- Define national policy and guidelines
- Assess needs
- Estimate cost and funding
- Identify available resources
- Prepare national plan of action
- Implement planned activities
- Monitor and evaluate

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Dr. Zufan Lakew

Psychological and physiological changes in pregnancy

It is well established that most primigravidae and some multigravadae experience anxiety during pregnancy and have doubts and fears about pregnancy and child birth. Most worry and are unsure of the out come of pregnancy. Could the fetus die?Could it be born abnormal?Could the pregnancy and child birth be traumatic or deadly to the mother? could the drugs taken, the exercise performed and others affect the outcome of pregnancy? are some of the questions the excpectant mother is unable to answer. This doubts and fears about the pregnancy some times lead to emotional disturbances manifesting in different ways.

Systematic health care beginning long before pregnancy undoubtedly becomes beneficial to the emotional and physical well being of the mother to be and in tun her child.

A complex process entailing anatomical physiological biochemical and psychological changes take place in the mother in the short period of human pregnancy. These changes usually almost completely disappear following delivery and cessation of lacatation. These complex changes taking place in the mother are responses to different types of stimuli arising from the fetus and fetal tissues. These changes are geared to create a healthy environment for the fetus without compromising the mothers health. Therefore, understanding of these changes becomes very important for all care takers to be able to differentiate the physiological changes from pathological situations which may occur during pregnancy delivery. The most important physiological changes taking place in the mother are summerised as follows.

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Placental hormones

Within few days of implantation the trophoblast starts secreting hormones. The most important hormones secreted are Human chorionic gonadotropin, human placental lactogen, estrogen, progesteron, relaxin etc.

Human chorionic gonadotropin (HCG) is secreted by the trophoblast from the early days of pregnancy and can be detected in the serum as early as 10 day post conception, and in urine at about 20 to 30 days post conception. HCG is important to maintain local environment favourable for implantation and growth of embryo and regulates the production of estrogen and progesteron.

The production of HCG increases rapidly and reaches maximum at about 10-12 weeks, of pregnancy followed by a slight fall and leveling there after until delivery. The peak may persist long in multiple gestations and gestational trophoblastic diseases. HCG may be detectable in serum and urine for about 7 to 10 days even after delivery.

Estrogen and progesterone are the other important hormones secreted during pregnancy. They participate in bringing changes in the uterus, cervix vagina and breasts in preparing the habitat of the fetus, smooth delivery and breast feeding

Changes in the Genital organs

The uterus increases in size changes in shape, position and contractility. The uterine muscle fibers increase about 15 times their prepregnant length. The uterus weighing 50 to-70 gms and having a cavity of 10 ml in the prepregnant state changes into a thin walled muscular organ weighing 900 - 1000 gm and accommodating contents of upto 5 Lts.

By the end of the 12th week the uterus becomes extrapelvic organ, displaces the small & large intestines. As the uterus rises out of the pelvis it also rotates to the right. The

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Dexterorotation of the uterus is secondary to the presence of the rectosigmoid on the left which presses the left and posterior wall of the uterus thus rotating it to the right..

Starting from the first trimester of pregnancy the uterus undergoes irregular and painless contractions. These contractions known as Braxton - Hicks contractions are non-rhythmic, painless, and mild. The frequency increases as the gestational age increases and at term may simulate false labor.

The uterine blood vessels also undergo hypertrophy and become coiled.

The cervix - becomes soft swollen and cyanosed. These changes may be the earliest signs of pregnancy. the cervical canal becomes plugged by a thick mucus which is expelled at the beginning of labor as the bloody show.

The vaginal mucosa becomes thickened and the vaginal muscles hypertrophy with a significant increase in the amount of connective tissue. This changes are necessary to accommodate the fetus during parturition.

Through out pregnancy whitish, thick ,non offensive,vaginal discharge which is not associated with pain or pruritis is a common finding because of the increased exfoliation of the vaginal mucosa.

Abdominal wall and skin

In about 50% of pregnant mothers stretch marks known as striae gravidarun appear over the abdominal skin, over the breasts and thigh. They may be reddish in color & glisten if they are of the present pregnancy while silvery glistening lines are indicators of past event. Hyperpigmentation over the skin on the abdomen as linea nigra, over the nipples, over the face and neck (cholasma gravidarum) are changes taking place in pregnancy.

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Breasts :- In preparation to lactation the breasts increase in size, the nipples become big and erect. Late in second and third trimesters of pregnancy a thick yellowish fluid known as colostrum can be expressed from the nipples.

Gastro intestinal tract

Changes in appetite, nausea, vomiting, craving and constipation are some of the symptoms accompanying pregnancy.

Due to the relaxation of smooth muscles of the GIT there exists a decrease in motility. The decrease in motility leads to delay in gastric emptying and constipation. The relaxation of the sphincters and the pressure exerted by the gravid uterus over the stomach results in gastric reflux (heart burn) which is a common symptom in pregnancy. Gum hypertrophy, and increased incidence of hemorrhoids are observed during pregnancy.

Cardiovascular system

There is an increase in blood volume (plasma, as well as blood cell mass) starting early in pregnancy. The plasma volume increases about 50% while the redcell mass increases only 30% thus resulting in a relative hemodiliution and decrease in Hgb. level.

Renal system :- The smooth muscle of the renal pelvis ureter and bladder undergo relaxation, this leads to dilatation of the renal pelvis and ureters.

The renal blood flow and the Glomerular filtration rate increases. The increase in the renal excretion added with the pressure effect of the pregnant uterus leads to frequency in micturation in the early and late trimesters of pregnancy. Relaxation of bladder muscle also increases urinary stasis and the risk of urinary tract infection.

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Weight gain in pregnancy

An average weight gain of 12 kg is expected during pregnancy, around 75% of this weight gain occurs in the last 20 weeks of pregnancy. This suggested amount of weight gain is only a guide and individual variations exist. A sustainable weight gain of not more than half kilogram per week and 2 kgs /month should be acceptable.

The weight gain during pregnancy is the weight of the products of conception, (fetus, placenta and liquor), the weight of the uterus, breasts, the increase in blood volume and fat storage all over the body. Excessive weight gain more than 2 kg per month should alert the clinician since water retention resulting in oedema may be the cause.Poor weight gain during the course of pregnancy also should alert the clinician since this at times may be related to poor growth of the fetus.

Diagnosis of pregnancy

Diagnosis of pregnancy is based upon certain symptoms and signs that are found by careful clinical evaluation and upon results of laboratory investigations. The sign's and symptoms of pregnancy are classified in to possible(presumptive) signs, probable signs and positive signs of pregnancy. Some of these signs and symptoms occurring as possible, and probable sings and positive sign's of pregnancy, need to be differentiated from situations which may simulate pregnancy. These signs and symptoms are summerised as follows.

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Possible signs of pregnancy

signs and symptoms	Gestational age	Differential diagnosis
Amenorrhoea	from early gestation	other causes of amenorrhoea ex. menopause
Morning Sickness	2-8 wks after conception	GIT Problems, infections
Frequency in micturation	1st trimester	UTI tension, diabetes

Changes of color of vagina, cervix	1st trimester	impending menses
Areolar darkening	1st trimester	effect of prior pregnancy
Food cravings	1st trimester	poor diet, stress
Fatigue	1st trimester	anxiety

Probable Signs of pregnancy

Softening of uterus and cervix	2-8 wks of conception	
enlargement of uterus'	8 wks of conception	tumors, fibroids
uterine contraction	1st - 2nd trimester	Bowel movement
fetal movements	16 - 22 weeks	Bowel movement
urine +ve for HCG	4 - 8 wks of conception	prior pregnancy

Positive Signs of pregnancy

Fetal heart beat	10 - 12 wks by Doppler
Auscultation	20 wks by fetal stethoscope
Fetal parts and fetal movements felt by examiner	16 weeks
Ultrasound visualisation of gestational sex	4 - 6 weeks

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Antental care and detection of risk factors

Antenatal care is a care provided to a pregnant mother. Its goal is that every pregnancy ends in delivery of healthy baby without impairing the health of the mother.

Antenatal care ideally should be a continuation of a systematic health care provided to a couple including preconception counseling. This is because medical illnesses and risk factors for obstetric complication or developmental abnormality may start long before conception and delivery. Identification of existing medical problems and treatment done to prevent adverse effects on pregnancy and its outcome therefore become very important. ex. Diabetes mellitus, Hypertension.

The length of human pregnancy averages to be = 280 days and this period is devided in to three equal trimesters of 14 weeks each. This division of the duration of pregnancy in to three trimesters is to help identification of major obstetric complication which are characteristic to each period.

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The first Antental visit

The goals of the 1st antenatal visit are

A. To define the health status of the mother and fetus
B. To determine the Gestational age of the fetus and expected date of delivery
C. To plan the future obstetric care

A detailed history, and general physical examination, including obstetric examination are performed. The necessary laboratory investigations are planned. Laboratory investigations like Hgb, Blgr Rh, VDRL, UA and others are requested as indicated

At this visit risk factors like

- Teenage pregnancy or pregnancy in the elderly
- Primigravidity or grand multiparity
- Bad obstetric history like, previous pregnancy losses, prolonged labour preterm or postterm deliveries, PPH, APH,congenital abnormality
- Previous operative deliveries i.e instrumental deliveries, cesarean deliveries , destructive deliveries.
- Presence of medical illnesses like anemia, hypertension, diabetes mellitus, cordial or renal disease, malaria etc.
- Short stature ht < 150 cm.
- other obstetric problems like APH, PIH, malpresentation, big for date, and small for date pregnancies etc. can be identified in late gestations.

Follow-up visits are scheduled as necessary but traditionally are planned every 4 weeks until 28 weeks, every 2 weeks until 36 weeks and every week there after untill delivery.

The aim of the consecutive follow-up visits are

A. To follow the health of the mother
B. To identify the obstetric risk factors and complications arising in due course of pregnancy.
C. Manage obstetric complications arising during pregnancy
D. Follow the growth of the fetus and assure viability
E. Immunisation
F. Psychoprophylaxis in pregnancy and labor
G. Education - antenatal information on diet, smoking, Alcohol consumption, breast feeding and danger signals (symptoms which the mother should report immediately).

Ex. vaginal bleeding, severe and continuous headache excessive oedema involving upper extremities and face, abdominal pain, fever, dysuria, escape of fluid pervaginum etc.

At each follow-up visit.

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- BP and wt is measured the actual and extent of change identified
- General physical examination is performed and new events identified.
- Obstetric palpation of the abdomen is performed and
- Symphysis fundal height measured, the actual and extent of change identified the lie, presentation and desent identified especially in late gestation.
- Fetal heart beet is auscultated.
- Presence of oedema is checkede.
- Laboratory investigation are requested as found necessary.

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1.0 How to Manage Indentified Risks and Problems in Pregnancy

During any pregnancy, complications can arise. Some of them are relatively minor; others , however, can be serious and life threatening which require medical attention. Some of these problems are caused by pregnancy while some others are existing even before but are worsend by the pregnancy. It is important for the women and her families which ones are dangerous and what to do when the problems occurs.

1.1 Bleeding in Early Pregnancy

Causes
In most cases ectopic pregnancy or abortion. Symptoms of PID (pelvic inflammatory disease and/or endometritis are sometimes similar and confusing.

1.2 Imminent Abortion in Later Pregnancy

Even if the patient and her family have a strong wish for children don't try to hold back a threatening abortion, as infection and sepsis might result. Await the spontaneous abortion (if possible), then make a curettage (best by suction or with a large and blunt curette).

Look whether the cervix has been injured by the abortion (with resulting insufficiejncy of the cervix); suture the defect when the uterus has reached a normal size. Check the fetal Rh blood group to recognise an incompatibility in RH-negative mothers with at least one living child.

Nevertheless not being able to give birth to living, healthy children means humiliation and loss of reputaiton for many women in tropical countries. Therefore an incompetent cervix is sometimes worth being treated even under simple conditions, if sufficient care can be warranted.

Previous history in case of incompetent cervix

- injury of the cervix after prolonged (still) birth and preterm delivery in the following pregnancy.
- habitual abortions with a tendency to happen earlier and earlier in the course of pregnancy

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Findings in imminent abortion

- often women present with anaemia and history of fever (usually malaria)
- if amniotic sac is not yet ruptured: Cervix > 3 cm, soft, shortened. Amniotic sac bulges through cervix.
- onset with rupture of fetal membranes without labour or bleeding (exclude premature labour by infection and hydatidiform mole).

Management

- bed rest in hospital, treatment of anaemia and malaria
- tocolysis if in rare cases available, if supervision and knowledge are ensured and if amniotic sack is not yet ruptured
- a cerclage may be sutured up to the 28th week of pregnancy and if the cervix is open less than 3 cm.

Risks of shirodkar and McDonald suture

- the thread can cut through the cervix and the lower uterine artery with possible exsanguination when it is not removed by the onset of labour. Therefore remove the thread at the latest in the 36th week of pregnancy!
- after a cerclage the dilatation period may be prolonged (sometimes even a section may be indicated), and there is a higher risk of cervical injury during vaginal delivery.

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1.3 Bleeding in Later Stages of Pregnancy

Insignificant bleeding is physiological immediately before labour or harmless, if occuring after examination, amnioscopy or sexual contact!

Major causes of severe bleeding

- premature placental separation, velamentous or deep insertion, placenta praevia
- ruptured uterine veins
- cervical erosions, polyps, carcinomas

Bleeding can be triggered by a sickle-cell crises. It can also originatge from the bladder in schistosomiasis.

Findings

- painless vaginal bleeding in pregnancy or in the early dilatation period (first stage of labour), often in breech presentation or transverse lie, implies a placenta praevia or bleeding from the margins of the placenta
- continuous abdominal pain, alsol between contractions, guarding, vaginal bleeding and starting shock symptoms suggest a placental abruption.

Management

Infusion, cross-matching, tocolysis (if available,) inform experienced obstetrician and prepare for operation; if findings are equivocal, examine with the speculum carefully, but do not do a manual examination (!) because digital examination may provoke further bleeding in case of placenta praevia.

In presence of a low insertion of the placenta, a vaginal delivery is possible, if one is prepared to do CS immediately in case of bleeding or other complications. In placental abruption waiting, ie hoping for an accelerated vaginal delivery, is only justified in less severe symptoms and if no signs of fetal depression are present. Otgherwise, in case of a still living child, do an immediate CS; in case of a dead child only do a vaginal extraction if the cervix is opened (othewise: delivery by SC), to avoid coagulation disorders.

Placenta praevia

This condition can arise if the normal sites of implantation are cicatrized by

- multiple pregnancies
- frequent abruption or curettage (D&C)
- infection of the uterine cavity.

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Placental abruption
Life-threatening for child (lack of oxygen) and mother (bleeding, DIC (disseminated intravasal bleeding), uterine necrosis by blocked circulation and sepsis). Causes:

- already injured placenta (insufficiency, necrosis, malaria)
- infection after premature rupture of fetal memberanes
- careless palpation by obstetrician
- trauma.

1.4 Anaemia in Pregnancy

Anaemia is the most frequent and severe disorder in developing countries

- It is variable in both origin and findings
- Hb values of 50% of all pregnant women in developing countries are <8.5 g%
- Indication for transfer to hospital <6.5 g%, indication for blood transfusion <5.0 g %, not seldom found in delivering women 2.0 g%
- The iron demand is increased by the factor four or five during pregnancy! T he demand for folic acid is especially raised in haemolytic processes such as malaria and sickle-cell anaemia.

Additional risks in anaemic women

- susceptibility to infections and preterm deliveries (>20%)
- lowered ability to sustain loss of blood during delivery
- threatening right heart failure
- malnourishment of fetus in utero as well as of child during nursing period.

Clinical signs of decompensation
Orthopnoea, venous congestion (jugular vein), raised systolic BP.

Preterminal findings
Pulmonary oedema, patient is agitated and confused (cerebral lack of oxygen), unconsciousness (coma).

Management of anaemia in pregnancy

- nutritional guidance, cooking courses/advice, hospital gardening, malaria prophylactics and, if in doubt, therapy
- additional supply of iron and folic acid: Give oral Fe(II) salts (Fe (III) salts are not absorbed well); eg 2 tab of 100 mg Fe(II) sulphate daily and 5 mg of folic acid once to seven times a week or give combined preparations. Iron causes loss of appetite and constipation, advise the patient to drink much and to eat lots of fruit (eg papaya)! Parenterally applied iron is dangerous (haemosiderosis) and should be considered only as an alternative to transfusions in Hb values less than 6 g%:

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dissolve four NaFe(II) gluconate ampoules (250 mg iron) in `1 1 of normal saline?. This solution is to be infused over 4 h; add 25 mg of folic acid orally.

- sickle-cell anaemia: intensive care of the pregnant woman; give high doses of iron always combined with folic acid (25 mg of per day). In threatening decompensation: tranfusion of concentrated erythrocytes.
- treat underlying diseases (eg hookworm, shistosomiasis etgc.;

1.5 Malaria in Pregnancy

Older children and adults can acquire an active immunity against malaria in holo-endemic areas. The antibodies are passed on to the fetus transplacentally and are traceable for about 3 mo in a non-nursed newborn, whereas in well-nursed infants this (relative) protection is extended up to 6 - 12 mo.

Additional risks in Malaria

- severe embryotoxic effects - abortion
- fever can trigger labour - aboortion, preterm delivery
- haemolysis - anaemia, hepatosplenomegaly
- bloked placental capillaries (by parasites, pigments and macrophages) placental infarction and insufficiency - "low birth weight tropical neonate"

the resistance aginst malara decreases in the course of pregnacy!
a tranplacental infection of the fetus can occur.

Malaria prophylactics in pregnancy
Education to avoid exposition: chemohtherapy: 1 tab of 250 mg of chloroquine sulphate (150 mg chloroquine base) per week (combined with proguanil twice a day 1 in case of drug resistance).

chloroquin is not teratogenic. Therefore it can be safely recommended to pregnant women. Halofantrine, mefloquine and pyrimethamine sulphat/sulphatoxine are contra-indicated during pregnancy. Quinine is not effective as prophylactic measure.

Management of clinical malaria in pregnancy
If drug resistance is not expected, give an initial dose of 300 mg of chloroquine per os or via nasogastric tube; otherwise give quinine (not exceeding 30 mg/kg/d iv: 10 mg 8 hourly, cave: quinine is embryotoxic and promotes labour). Quinine may be combined with doxycycline (2 x 100 mg day cave: accumulation in fetal bone a tooth buds; estimate risks carefully!).

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1.6 Hepatitis B and HIV in Pregnacy

The major ways of transmission in hepatitis B in Africa south of the Sahara desert are perinatal and arise from close mother-child contact (prevalence rate of 60-70%). The infant may be protected by a combined active/passive vaccination after birh. STD retrovirus seem not to be embryotoxic, but transmission to the fetus is possible at any stage (occurs mostly in the last third of pregnancy or soon before the seroconversion of the mother). About 30% of children of infected mothers become infected themselves; higher risk of transmission are in the presence of additional infections e.g chorioamnionitis.

1.7 EPH Gestosis(preeclampsia-eclampsia syndrome)

Edema , proteinuria, Hypertension and tendency to develop convulsions. In many developing countries, various degrees of this disease are frequent and become severe during insufficient obstetric care. There are three groups especially susceptible to EPH gestosis:.

-primigravida
-women with vascular/renal disorders
-age <16 years
- women with over distended uterus

Causes

In normal pregnancies adenocortical steroid production increases resulting in hypercorticalism with subsequent retention of salt and water and vascular dilation due to hypervolaemia. Kidney circulation may be restricted due to compresion of the renal artery or ureter with limitation of urine flow or, in very young women, by as yet hormonally insuffeintly lax connective tissue and the tough, muscular abdomen. The restricted kidney circulation activates the renin -angiotensin-aldosterone system leading to high BP and renal albumin loss. Conflicts during pregnancy, fear and other strains may agravate the system as well as exhausting physical work. Removing the cause of kidney compression, eg. by terminating pregnancy, usually stops the disease.

Findings

-increased haematocrit and BP.
-headache, confusion, susceptibility to light and noise, vomiting
-massive proteinuria
- painfull liver as a sign of severe disease (HELLP syndrome: haemolysis, elevated liver function tests , low platelet counts)
-oliguria, anuria (late symptom)
-final right heart failure and pulmonary oedema

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Principles

-Suport renal function
-treat hypertension
-block convulsions
-sedation: magnesium or diazepam.
-oral anti hypertension
-quite and dark room
- give much protein, fruit, little fat, normal salt intake .Avoid salt restrictions and diuretics.
- terminate pregnancy

Emergency procedures in severe eclapsia

The maternal mortality in eclampsia depends on the local intensive care facilities, but usually is very high.

Management

-resuscitation, intubation, iv access
-isolation of patients and strict calm environment
-transuretheral indwelling catheter (output should be atleast 30 ml urine /hour)
-measure central venous pressure
-block convulsion: 5-10 mg diazepam iv
- additional sedative if necessary
-intensified anticonvulsant therapy: MgSo4
-extended antihypertensive therapy
-exclude epilepsy, cerbral infections, hepatic or diabetic coma, severe systemic infections, hypoglycemia , renal failure
-terminate the pregnancy (c/s or medical induction)

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1.8 Uncertain date of delivery

Especially when women come for antenatal check up late in the third trimester, LNMP is not known and ultrasonograhic imaging is not availble acurate dating is difficult. However , since real postmaturity is rare, it is mainly important for those who have got additional risks like:

-preclampsia-eclapsia syndrome of moderate to high grade
-diabates
-previous c/s or stillbirth where resection is planned
-multiple pregnancy

2.0 Problems during delivery

The following complications are common

- insufficient contractions (exhaustion intensified by malnutrition and anaemia)
- anomalies in presentation
- protracted labour due to pelvic deformation
- relative disproportion
- protracted delivery (due to wrong management)
- uterine rupture (eg status after c/s)
- delivery in severe anaemia
- bleeding during delivery (placenta praevia, abruption)
- post partum haemorrhage (eg in atonia, genital laceration)
- umbilical cord prolapse
- overlooking the second of twins (Twin pregnancy is often not diagnosed in ANC and the woman was not examined properly during labour and after the birth of the first twin)
- coma during and soon after delivery
- infectious diseases (malaria, relapsing fevwer, hepatitis, meningitis etc.)

2.1 Secondary Weak Contractions

Usually a sign of maternal exhaustion often presents with hypoglycemia and exsiccosis, but is also found in uterine rupture (has to be excluded before stimulation of labour by oxytocin!)

Management

Sweetened tea, glucose infusion followed by electrolyte solution (e.g. normal saline), sleep and rest after having checked essential parameters (temperature regularly; partogram))

2.2 Severe Anaemia in Delivery

Premature births are frequent in anaemic women and often provoked by malaria. The children are usually small. Therefore, CS, VE or forceps is seldom required. However, there is a risk of decompensation in additional loss of blood with right heart failure.

Management

- continuous supervision circulation - also in the delicate period 1 day after delivery!
- respiration support with oxygen

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- delivery in an upright or crouching position
- antibiotics (penicillin, amoxicillin, cephalosporine)
- malaria prophylaxis
- transfusions only in emergency. Prefer packed RBC! High volumes of plasma (full blood) bear the risk of right heart failure (this is generally true for all infusions). Infuse slowly and simultaneously enhance diuresis (furosemide im)
- minimize bleeding after delivery (sutures, oxytocin, press the uterus against the symphysis for 15 min)

2.3 Malaria in Delivery

Symptoms
Fever and shivering, cerebral findings (confusion, convulsions, eventually coma!), early pains, hepatosplenomegaly; positive thick blood film, anaemia. Exclude high BP in eclampsia (severe gestosis)

Management
- the patient should be kept warm
- venous access, infusion
- shorten the last stage of labour by VE or forceps.
- quinine (iv 10 mg/kg every 8 hr, this dose should not be exceeded in pregnant women), as a last resort, quinine im (10 mg/kg every 8 hr).

After delivery malaria therapy should be continued because a new attack of fever is likely to occur in childbed! Then other drugs like chloroquine and primaquine can be used.

2.4 Anomalies in Presentation

High Longitudinal Position of Fetal Head above Pelvis

- suspect disproportion (racthitic pelvic). CS possible? Prepare for referral if necessary?
- empty bladder
- the woman should often change from lying on her right side to lying on her left side. Imitate a quadruped animal, or place herself so that - in diagonal presentations - the small fontanel (i.e. the fetal back) shows downward. Let her freely change positions or let her walk around and encourage her to do circular pelvic movements. CS is indicated if no progress is made in the course of delivery.

Deep Transverse Arrest

The head has not turned while passing the upper pelvis. A spontaneous delivery is not possible. Empty bladder, position the woman on to the side of the small fontanelle, "rocking position" (see above), crouching. A (rotating) VE is possible in position 0/5, 1/5, (2/5) otherwise CS.

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Face Presentations

In mentoposterior presentation: a spontaneous delivery is impossible - CS! In mento-anterior presentation: vaginal delivery is possible, if experienced obstetrician available delivery is protracted.

Breech or Pelvic Presentation
(i.e. the head of the child comes last)
3-4% of all pregnant women present with breech presentation (tropics up to 8% however, more than 80% have spontaneous vaginal delivery

Requirements for vaginal delivery of a breech presentation

- early diagnosis (Leopold's maneuvers, location of fetal heart tones)
- disproportion unlikely (normal pelvis, small child)
- no suspicion of fetal malformation (hydramnios, hydrocephalus)
- no signs of deep inserted placenta or placenta praevia (amnioscopy)
- no additional fetal or maternal risks
- second or pluripara; higher risk in primigravidae (consider risks of CS and of vaginal breech delivery carefully)
- breech presentation of the leading fetus in twin pregnancy requires CS!

Handling of a delivery in breech presentation

- do not try to turn the child for a head presentation (danger of placental abruption!)
- expect protracted delivery, be patient, don't hurry' proceed "conservatively" (e.g. don't incise the amniotic sac - the umbilical cord might prolapse).
- empty bladder, pudendal nerve block, usually episiotomy
- bracht's maneuver (This is no extraction, but just a form of assistance in the physiological development) Hold back the fetal rump until the body can be pushed out with one single contraction. The child's back (showing anteriorly) and his flexed thigh(s) are taken altogether, as far as they are already born; quite strong pressure is applied from the abdomen to lift the whole "package" and turn the child, uring one contraction, arraign the symphysis onto the mother's abdomen (pulling target wouldn't be physiological). Head and arms may follow spontaneously.
- spontaneous breech delivery is often easy with the patient in a sitting position using birth chair.

Oblique and Transverse Lies (Torso Presentation)

They are frequent in multigravidae with an overstitched uterus and can lead to prolapses of limbs (arms, legs) or umbilical cord, and uterine rupture, thus threatening child and

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mother- a CS is usually performed when the child is still alive. Combined vagino-abdominal version maneuvers, if required with a loop around the child's ankle to turn it on his buttocks, are indicated only for delivering the second of twins, a dead child or sometimes in a multigravida.

2.5 Relative Disproportion (*ie. large head-small pelvis)*

Causes:

short woman, pelvic disorders (poliomyelitis, rickets, trauma), large child.

When a disproportion is suspected, anatomical estimation of the pelvis will be uncertain, though assessment of the following parameters certainly helps to clear up the situation:

- can the promontorium be reached (effortless) during vaginal examination?
- shape of sacral cavity (rectal examination): even? well rounded/formed/shaped?
- interspinal distance (distantia spinarum): protruding spine?
- dorsal face of symphysis: cornered? exostosis?
- subpublic angle: two fingers should fit in between
- ischial tuberosities: four knuckles should fit in between
- body size: suspect disproportion in women below 1.5 m
- Michaelis' rhomboid: regular shape?
- head felt above symphysis in already ruptured membranes

Outer pelvic distances, X-ray sonography are even less reliable. The only way of getting clear information about whether "this" head may just pass "that" pelvis means attentively watching and interpreting the course of delivery per time unit. Let the delivery begin normally under close supervision.

This "trial of labour" may be continued as long as mother and child are well, no additional complications occur -e.g. gestosis - and delivery proceeds. In institutions, with no operation facilities, a trial of labour is only justified if clear criteria for referral exist and a nearby hospital can be reached within 4 hours; otherwise refer women suspicious of disproportion to hospital before the first stage of labour.

If there is only protraction without additional disorders, empty the bladder, rocking position , fourfooted position (contra-indicated in ruptured amniotic sac and if Zangemeister maneuver is positive - umbilical cord may prolapse!).

2.6 Protracted Deliveries (prolonged labour)

Many dangers arise from protracted deliveries: sub- and postpartum infections (sepsis), uterus and perennial rupture, vulval edema, secondary fistulae of the rectum, vagina and bladder, intra-uterine death or severely damaged child.

Protracted deliveries lasting several days are common in tropical countries - saving the mother has to be the first priority for she will have to care for other children and relatives.

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Never stimulate contractions in exhausted and exsiccated women as this could precipitate uterine rupture.

2.7 Uterine rupture

Announced by excruciating, painful and "never ending" contractions, restlessness caused by fear of death, with a typical sudden relief and subsequent collapse. On abdominal examination: upward movement of the Band ring (a furrow above the lower uterine segment) to the umbilical region indicates rupture. In covered ruptures (e.g. after CS) blood loss may be low and symptoms begin less impressively. Nevertheless there is a high risk of maternal and prenatal mortality!

Management of uterine rupture

- inform surgeons, measure BP, pulse and temperature
- give an infusion of 1-21itres 5% glucose (alternative: sweetened tea - the grade of exciccosis, the amount of oral fluid needed and the risk in immenent anesthesia should be carefully balanced)
- antibiotics
- if febrile: chloroquine or quinine and keep the patient warm
- empty bladder
- cross-match, Hb, Hct, electrolytes
- when child is alive or when child is dead, perform laparotomy. Dependent on the presence or absence of severe infection and the condition of the edge of the tear and patients parity, repair of the tear, subtotal hysterectomy or total hysterectomy can be performed. For less experienced surgeons this simpler supravaginal hysterectomy (abdominal subtotal hysterectomy, leaving the cervix uteri) may do.

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2.8 Coma During Delivery

Coma may have two causes

- metabolic: too much volume infused (for tocolysis or as oxytocin glucose), eclampsia, hyper or hypoglycaemia or hypokalaemia, hepatitis, sepsis, magnesium overdose to suppress uterine contractility.
- cerebral: trauma, haemorrhage, malaria, meningo-encephalitis (e.g. cryptococcus mycosis in AIDS), epilepsy.

Management

- basic life support. Oxygen, venous access.
- laboratory examinations: CBC, thick film, electrolytes (K^+, Na^+) , serum glucose, transaminases
- infusion of glucose, cortisol iv
- stabilise temperature, insert indwelling urethral catheter
- check for causes and apply specific therapy:
  - over infusion: stabilise fluid balance
  - magnesium overdose: give 10 ml of 10% calcium
  - in malaria: 10 mg/kg quinine iv every 8 h
  - meningo-encephalitis: broad spectrum antibiotics
  - cryptococcus mycosis: amphotericin B (if available)
  - eclampsia:

2.9 Amniotic Fluid Embolism

Causes, findings

Caused by (traumatic) opening of maternal uterine veins (section, ruptures) and leading to pulmonary oedema right heart failure, coagulopathy due to enhanced fibrionolysis and resulting in profuse uterine bleeding.

Management

Assisted respiration (PEEP if available), intensive care, diuretics (in emergency bleeding of the patient (release of 500 ml blood), 3000 units of iv heparin initially, then 500/h (20000 units/day), cortisol.

2.10 Post Partum Haemorrhage

Causes

Uterine atonia or infection (sepsis), genital varicosis, rupture of uterus during delivery, placenta accreta or placental remnants in utero, coagulation disorder.

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Findings
Persistent vaginal bleeding after delivery - hypotension, tachycardia - shock.

Management
- oxytocin infusion
- cross-match, prepare transfusion
- empty bladder, indwelling catheter
- speculum examination and manual control using a long and tight glove to determine whether the uterine cavity is empty and not ruptured (outline after all vaginal deliveries with history of previous (CS)
- all occurring injuries must be sutured immediately (at least roughly)
- in case of rupture or placenta accreta (which cannot be removed):
- do laparotomy and if necessary abdominal hysterectomy
- when uterus is empty and not ruptured, antevert it and squeeze it between a vaginally introduced fist and the other hand pressing against the abdomen for more than 10 min
- ice-bag, then compression of the uterus (abdominal compression bandage including small sand bags)
- in late atonia: instrumental revision to remove placental remnants
- restore volume: give 500-1000 ml plasma substitute
- give blood transfusions only in severe circulatory distress; only as much erythrocytes as lost previously
- in coagulation disorders when no special laboratory is at hand: fresh frozen plasma or transfusion of whole blood.

An emergency (subtotal) hysterectomy is indicated when any cervical or vaginal cause of haemorrhage is excluded and bleeding does no stop after a long period of uterine compression. Do not wait until the woman is nearly exsanguinated and possibly too weak for the operation. Decision requires very critical timing!

2.11 Operative Deliveries

In many situations the life of the mother has to be weighed against that of the child - this dilemma should usually be solved in favour of the mother. If you had the choice to save a child's life by immediate section but the local health center is poorly equipped, you would rather prefer the safe transport of the woman to the next hospital.

More important than the operation itself is to recognize risks in time (sorting and referring of patients at risk (disproportion, fever, anaemia, etc.) and to organise referral or ask for help in time. The organisational pathways for operative deliveries have to be prepared and trained on quiet days:
- who will inform the surgical staff?
- where is the key to the emergency generator?
- fuel tanks filled?

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- medications stored and checked?
- devices in order (e.g. VE), instruments sterilised?
- iodine supply?
- persons involved at hand? Etc.

Beginners in obstetric care will have to practice normal deliveries until they know the normal mechanisms and variable course by heart, before they contemplate surgery. Reading textbooks is an essential part but is never sufficient without practice.

Cesarean Section (CS)

CS is the only way to deliver a live baby when:

- the head does not enter deep and tightly into the pelvis and no progress is made during labour (disproportion; after an ineffective trial of labour, the most frequent indication in the tropics)
- special anomalies in presentation are present (transverse lies, mentoposterior face presentation, deep transverse arrest over "2/5")
- eclampsia, uterus rupture, umbilical cord prolapse, severe placental abruption and other emergencies of mother, child or both are present.
- the first fetus shows an abnormal position is a twin pregnancy (e.g. breech presentation)

Fetal indication for CS (e.g. low frequency of fetal heart tones) is only relevant if the local maternal morbidity and mortality after CS is very low comparable to developed countries), which is rare in DC. However, CS is only indicated if the fetus is still alive. If the fetus is dead, vaginal extraction is usually safer than CS in DC. Women who have had a CS before should be handled very cautiously concerning a trial of labour, especially when they have never had vaginal delivery. The former surgeon's skill is not known therefore an uterine rupture could be only too imminent. As for the child, a speedy CS is quite harmless, although dependent on the kind of anesthesia, but the mother will not be able to look after her baby immediately and needs intensive care and advice as breast milk production begins. Maternal risks of infection and risks in later deliveries (ruptures) are increased!

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Positioning

The patient is put in a slightly left-lateral position (about 15% tilted) to avoid caval compression.

Anesthesia

- local anesthesia in abdominal wall (e.g. procaine or lidocaine HCI solution): for emergencies with no available anesthetist. The peritoneum cannot be anaesthetized with this method. Contra-indicated in infections, adipositas, restless women; not for beginners!
- combination of local anesthesia plus infusion of of ketamine (5 mg of diazepam, 50 mg of ketamine as infusion during opening of the peritoneum).

- spinal: simple and relatively safe, but be aware of severe hypotonia - let the woman sit for another 5 min after inaction, permanently checking the BP!

!

Vacuum Extraction (VE)

Only permitted if the head is already on the pelvic floor. VE is quite simple and when done properly - carried no danger for the mother. On the other hand, injuries of the fetal head with long-term consequences (CNS!) are frequent, above all in a forbidden "high" VE.

Forceps Delivery

In the hand of experienced obstetricians forceps is a safe form of delivery, especially for the fetus. Fetal injuries are rare when forceps are used. Nevertheless forceps are not easy to handle and inexperienced physicians might easily cause severe maternal injuries (including rupture of the bladder) and fetal head injuries. This kind of catastrophic result may occur in "high forceps" (head "2/5" or 1/5 if one tries to rotate the fetal head. "Rotational forceps" is not an alternative to CS. If CS is excluded (e.g. operating theater unavailable) rotation of the fetal head is less dangerous using VE! Forceps delivery is only indicated if the head is firmly resting on the pelvic floor and its use should be restricted to experienced personnel.

Requirements

As in VE, only if the head is tightly on the pelvic floor and not or only slightly palpable on the abdomen (>"2/5"). Further condition: Straight or nearly straight presentation of sagital suture (of fetal head).

Symphysiotomy

The advantage of symphysiotomy is the fact that future deliveries may occur without risk of CS. Nevertheless symphsiotomy is associated with several other severe maternal risks and it should be restricted to life-saving situations, if CS is excluded in a particular setting. However, if symphysiotomy fails, a CS is the only way to save the child. Healing of the pelvis takes a long time, and the pelvis may remain unstable if the inferior pubic ligament is not spared or ruptures sponanteously after the incision. Usually a subsequent orthopedic correction is unavailable. Injuries to bladder and urethra occur.

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Necessary conditions

The child has to be alive, its head not more palpable than "3/5", the woman slim and a primipara.

Instruments
Urethral catheter (not too soft), a sharp (to cut the skin) and a blunt scalpel (to cleave the symphysial cartilage), delivery set (episiotomy scissors).

Placental separation and manual removal

Usually the placenta is detached spontaneously from the uterine cavity. Complications during placenta separation are often caused by an impatient obstetrician:
- cervix spasm caused by ergometrin injection
- cord traction too early resulting in spasm or incomplete placenta

Thus keep your hands off the uterus and placental cord after delivery if haemorrhage is limited and manual removal of placenta not yet indicated! Instead, a specific part of the cord near the vulva should be marked immediately after delivery and watched until it starts a spontaneous descent indicating placental separation. Only then is slight traction allowed to assist the complete expulsion of the separated placenta while the uterus is held back using the other hand. Both maternal and fetal sides of the placenta are then inspected very carefully. If there is any evidence of incomplete placenta the uterus must be inspected manually.

lOctytocin (not ergometrine!) injection (1 amp = 3 IU) after delivery enhances placenta separation; this is not routinely necessary in countries with low financial resources and limitations in qualified staff.

If episiotomy and lacerations haemorrhage is moderate one can wait for spontaneous separation of the placenta for up to 30 min after delivery. During this period, bleeding from episiotomy or lacerations can be suppressed by using gauze bandage and the woman should start nursing her child; the suckling reflex will release oxytocin from the pituitary gland. After 30 min the bladder should be emptied. In addition, uterus contraction can be stimulated by slight abdominal massage or oxytocin infusion; thereafter the placenta is often expelled spontaneously.

If there is still no progress or in case of intolerable haemorrhage, the placenta should be removed manually.

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Manual removal of the placenta

Usually under general anesthesia, after application of an indwelling catheter, the uterus is grasped with a hand placed on the abdomen. The other hand is introduced into the vagina and follows the placenta cord into the uterine cavity. The hand palpates the edge of the placenta and is thereafter inserted between the placenta and the uterine wall (palmar side towards placenta). The hand is swept gentl y (!) to peel the placenta from it's attachments to the uterus. When the placenta is completely separated, it is grasped and pulled from the uterus. Usually oxytocin infusion is indicated. Both maternal and fetal sides of the placenta are then inspected very carefully. If there is any evidence of incomplete removal the uterus must be re-inspected.

Lacerations/Episiotomy

Episiotomy

Episiotomy is a incision technique, in DC usually carried out by midwives, to widen the vulvar orifice to permit easier passage of the fetus and avoid overstreching of the perennial muscles, which might otherwise result in perennial lacerations. In Europe episiotomies are often necessary in first deliveries and less so in multigravid women. In contrast, in may areas of DC episiotomies are rarely indicated in normal deliveries because the pudendal muscles in women used to hard physical field work in crouching or squatting positions are often very strong and less vulnerable to overstitching.

Nevertheless episiotomy is indicated when a tear is imminent which if often the case in forceps, VE or breech deliveries> In these cases a surgical incision can be repaired more easily than a jagged tear.

Types of episiotomy

- median (median raphe is incised in direction of the anal sphincter - easy to accomplish and to repair, but might result in a third or fourth degree tear)
- mediolateral (incision is done down and outward to avoid the anal sphincter- more bleeding, but may not result in a fourth degree tear)
- lateral (increased bleeding, difficult to repair, should not be used)

Lacerations of the birth canal

- first degree lacerations: only mucous and skin are damaged - minimal bleeding
- second degree lacerations: tear of mucous or skin plus disruption of perinial muscle - but the sphincter ani is spared - bleeding often brisk
- third degree lacerations: involve the above structures plus the sphinter ani muscle - bleeding increased
- fourth degree lacerations (often called complete tear): include the above structures plus the rectal lumen - repair is difficult - bleeding profuse

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Other lacerations (often in protracted labour, forceps delivery or VE) may include the whole cervix or the urethra or may result in vesico-vaginal or recto-vaginal fistula. In these cases (except cervix tear) only a preliminary repair can be performed after delivery. Definitive surgery to correct the damage is usually limited to experienced gynaecological surgeons in referral hospitals.

Repair of episiotomy and lacerations should be performed soon after in less than 8 hours.

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CLEAN AND SAFE DELIVERY

Dr. Lukman Yisuf

1.0 Managing Normal Deliveries

Delivering a baby is a natural process and not a disease ! 80% of all deliveries take a normal course. The art of obstetric care is based on experience and aims at recognising the remaining 20% of deliveries needing further treatment. However, numerous problems in obstetrics arise from acting precipitously and losing patients ("the safest place for an obstetrician to put his hands are his trouser pockets!") - or by simple ignorance of early signs of danger.

1.1 Prevent fear and overstraining

Maternal stress - danger

- the pregnant women or the women in the course of labour should feel accepted by the professional health personnel
- learn local dialects or languages!
- concentrate on prophylactic education such as supervising the women and infants, giving advice to nursing mothers, dietary care and cooking, gardening, birth control (family planing)
- learn to use a fetal heart tone fetoscope (wooden or iron "funnel") on healthy pregnant women!
- be watchful for risk factors like a small body, high BP, anemia and others, Call for help or refer early as almost all obstetric troubles will announce themselves far in advance.
- renounce heroic and overstressing "solos" and stick to clear criteria in referral (Partogramme, below).
- acquire comprehensive knowledge through adapted textbooks (see bibliography)
- volunteer for practical courses in host country
- trust your own hands, feeling (based on experience) and the use of appropriate technology - most high tech equipment can be replaced by simple means.

The Most important Tools for Tropical Obstetrics

Three "devices" are most important in obstetrics

- the midwife's or the obstetrician's own hands: judging presentation; frequency, strength and duration of contractions; vaginal examination; kneading the mothers back when hurting, propping and supporting her; holding back the child's head, unfolding its limbs and supporting the perineum during delivery.
- fetoscope
- partogramm forms

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In addition, some other tools are indispensable even in the tropics: gloves, watch, normal stethoscope, sterilisation and infusion equipment, delivery sets (episiotomy scissors, two blunt clamps, umbilical ligature and scissors, threads), respiration bag, pharyngeal tube, thermometer, BP machine; blankets, covering or rugs to keep child and mother warm for an effective prevention of acidosis.

1.2 The course of delivery

Monitoring by partogramme

Partogrammes are an important means to determine the point when help of more advanced team members should be called for or the patient be referred to hospital/operation/section. As the most important parameters of delivery are sketched on the form, you obtain a quick and clear impression on what's going on:

- important information on the woman and the course of pregnancy
- cervical dilatation
- entering of fetal head into pelvis by abdominal (not vaginal) palpation
- fetal heart sound between contractions
- amniotic sac and fluid
- disproportion of head and cervix
- qualities of contraction (duration, intensity, frequency)
- BP, pulse, temperature, laboratory values, medication
- decisions.

Limitations of using the partogramme

The mere availability of a partogramme form will not improve delivery outcome. In many DC hospitals midwives with poor training standards or of low motivation fill in the forms because they were told to do so without understanding it and they just want to please the evaluating physician. Therefore, consequences are not taken in time and the partogramme is blamed as useless or not adapted to local conditions. Therefore, staff training in using the forms and improvement of staff motivation is far more important than the imprint and the availability of the forms. A motivated midwife, experienced in using the partogramme, will carry on very well even if the forms are out of stock because she will be well aware of delivery progression.

Therefore

- partogramme forms have to be designed according to the local conditions (eg. average degree of education, professional training, culture etc.).
- only use the nationwide introduced partogramme forms.
- training how to use the partogramme is far more important than the form itself.
- regular supervision should be guaranteed (organised as in-service training in order to promote motivation)

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Birth behavior and position in normal course of labour and delivery

An active birth behavior (walking around, sitting, standing) of the patient is important because it reduces pain. Most women prefer changing positions freely as they like. They often feel most comfortable in an upright position during delivery. Vertical delivery positions were common in most DC before colonial times. Nevertheless they are accepted in quite a few hospitals nowadays because in many countries the obstetric standards in hospitals or dispensaries are still of colonial age (lithotomy positions for delivery, pain is expected to be suppressed, mothers are treated as minor or inferior).

The lithotomy position is less physiological (head is stretching the cervix only during labour pains but not due to weight in between) and bears the risk of the lower vena cava syndrome (compression of the vein by the weight of the uterus).

In normal deliveries it is advisable to give the woman the free choice in finding out which position is less painful and most appropriate for her.

Major causes of prolonged delivery

- fetal head is too large for maternal pelvis (disproportion)
- adverse presentation of lower parts
- cervical dystocia (fear, spasms)
- secondary weakness in labour (exhaustion, anemia, exsiccosis, hypoglycemia).

"Trial of Labour"

CS has to be considered cautiously because it coincides with risks of infection and with hazards at future deliveries. As one cannot tell whether "this head will pass this pelvis", a "trial of labour" is indicated using a partogramme, when operation facilities are in reach, even in suspected disproportion. This trial of labour can be interrupted by operation at any time - according to the partogramme.

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Monitoring

Cervix Dilation

The most critical feature in the partogramme is the registration of cervical dilation. The active phase of a normal delivery starts with regular and effective contractions when the cervix is opened 3-4 cm. From now on the cervix will open about 1 cm/hr normally. A cervix which opens more slowly requires alertness (alert line in the graph: 2h distance from ideal line - a more experienced obstetrician should be informed). Another 4 h later the "action" line indicates a necessary intervention. However, these are values for "term deliveries" only.

Lack of progress in delivery can also indicate that the date of birth has been falsely estimated! This should be recognised at the latest at the alert line by an experienced obstetrician - he will wait calmly, let the woman rest and sleep instead of forcing labour in panic (eg. colon irrigation, oxytocin infusion) and thus provoking an unwarranted complication.

Engagement of Fetal Head

The descent of the fetal head and its relation to the maternal pelvis is measured during abdominal examination and the result given in "fifths".

- 5/5: the head is "totally" free and mobile, palpable above the superior pelvic aperture
- 4/5: head "touches: the pelvis, "4/5" are palpable
- 3/4: head is not yet "in" the pelvis, "3/5" may be felt, and two fingers can just be placed between it and the maternal symphysis (Leopold's maneuver No. 4,
- 2/5: greatest circumference has just entered the pelvis inlet, abdominal palpability of "2/5"
- 1/5: head deeply fixed in pelvis ("1/5" palpable)
- 0/5: head no longer felt in the abdomen.

The abdominal assessment of the head position is important. A vaginal examination may be misleading as the head's greatest circumference can be will above the pelvic entrance when appearing in the vulva. A vaginal - operative delivery would then easily escalate!

Vaginal Assessment of the Cervix

When the head is too large for the pelvis (disproportion),there is insufficient pressure and resulting stretching of the cervix. The cervix opens more slowly. Other signs of expected protracted delivery would be the overlapping of the fetal parietal bones or when the cervix is thick, rigid and oedematous.

Fetal Heart Sounds

Amniotic sac and fluid
Amnioscopy

The amniotic sac usually ruptures spontaneously during labour (eg. with the cervix partially opened). As there is already a tight connection between head and pelvis the umbilical cord will not prolapse. But if the head (or breech) is not well engaged (eg 5/5), the danger of cord prolapse is imminent.

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Premature rupture of membranes

A premature rupture of the fetal membranes, i.e. before the actual onset of contractions, indicates an amniotic infection, especially in the tropics (if the rupture was not provoked by early incision by an impatient obstetrician). Normal amniotic fluid is clear and smells stale. Amniotic fluid is alkaline compared to acid, spontaneously released urine, which is sometimes involuntarily liberated without notice. Yellowish or green colour means a previous or still existing danger for the child.

Procedure in cord prolapse

- prepare for immediate CS
- elevate pelvis
- vaginal examination and push fetal head back
- tocolysis (if available) or diazepam 5 - 10 mg.

Procedure in prematurely ruptured membranes

If the baby's head is not yet fixed in the pelvis, let the woman lie down and rest (usually on her left side) with the pelvis slightly elevated. If the head is fixed, the woman may walk around. Do a blood count, check temperature regularly (every 2 h), give prophylactic penicillin or cephalosporine, at the latest after 24-48 h. Induced contractions with oxytocin (There will be no progress in cervical dilation without effective contractions).

Avoid unnecessary vaginal examinations to reduce the danger of infection.

Amniotomy technique in prolonged labour

A protruding full but soft sac in front of the head may be the cause of insufficient contractions. Exhausted women should drink and sleep, otherwise perform colon irrigation and possible amniotomy (with a needle or sharp hook during examination).

Labour

In the dilation period (first stage of labour) pains will occur regularly (about every 5 min), they are palpable and last 20-40 seconds. Their intensity is estimated manually and in vaginal examination it is possible to judge whether they have a dilating effect on the cervix and if the leading part of the fetus (head or breech presentation) strains and stretches the cervix.

When the single contractions are too weak and rare, prematurely, a full bladder or an exhausted mother (lack of fluid, hypoglycemia, anemia) might be the reason. Consequently, let the woman drink and in case of normal fetal heart tones - let her have a nap. If she is not too exhausted, let her walk, Give colon irrigation and induced delivery by oxytocin/anmiotomy if the situation has not changed after 2 hr.

Too frequent or very violent contractions may be dangerous for the child and could be an early sign of uterus rupture. In this situation, colon irrigation and amniotomy are contra-indicated, as it could possibly provoke a definite uterus rupture!

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Short-term tocolysis during violent labour contractions, imminent uterus rupture or transport to referral center:

- beta mimetic adrenergic agents (often not available)
  - fenoterol 1 amp (1 ml = 0.0025 mg) in 4 ml infusion, infuse 2 ml slowly (3-5 min.)
  - ritodrine 150 mg (three 5 ml ampoules or one 10 ml vial) in 500 ml fluid, yielding a final concentration of 0.3 mg/ml. Usual initial dose 0.1 mg/min (approximately 20 drops per min)
- magnesium sulphate initially 4 g (20 ml of 20% solution) The rate of infusion should be slow enough to prevent flushing or vomiting. Continuous infusion 200 ml (10%) in 800 ml 5% dextrose at a rate of 100 ml per hour (antidote: calcium gluconate 10-20 ml of 10% solution)
- ethyl alcohol (spirits) orally if no other drugs available (never give ethyl alcohol in combination with barbiturates)
- cold compresses or ice bags on the abdomen if nothing else is available

Measure temperature, circulation parameters and respiration frequency. The woman should rest on her left side. A family member or nursing assistant should care for her permanently in order to assure relaxation and avoid fear and panic. She should be requested to breathe slowly using her abdomen (avoiding hyperventilation).

Blood Pressure, Pulse, Temperature

Checking BP and pulse is very important in hemorrhages, inferior vena cava syndrome (compression by uterus, fainting - left lateral position), gestosis, infection, exsiccosis, shock. Checking the temperature every 2 h is especially important in early rupture of membranes and protracted delivery.

Laboratory Checkup

Blood count and group, urine analysis (ketonuria in protracted births: exsiccosis, hypoglycemia; albuminuria: gestosis)

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ABORTION AND ITS MANAGEMENT

1.0 Abortion in first trimester

Miscarriage below 16 wk of gestation.

The word "abortion" is commonly associated with an illegally induced ("criminal") or ("unsafe")abortion. It is therefore advisable to find out the proper definition amongst your staff. On the other hand, in most developing countries, artificial induction of an abortion is illegal, but nevertheless widespread due to socioeconomic reasons. There are many different and traditional methods of inducing abortion you might never be able to get to know about, even if you live in an area for a long time. So, as doctors, we treat them all as "natural abortions".

Causes

The commonest cause of spontaneous early as well as late abortions in developing and tropical countries are infections (malaria, viral and bacterial), followed by genetic disorders and malformations of the uterus and the uterine cavity (myomas, congenital uterine malformations). The latter causes might be responsible for habitual abortions (three and more consecutive abortions).

Signs

Patients, undergoing first trimester abortion, might present with symptoms of more or less lower abdominal pain as well as those of vaginal hemorrhage. This depends on the degree of expulsion of the disturbed pregnancy. There are the following stages:

Threatened abortion: Uterine size corresponding to gestational age (amenorrhoea), soft, but also signs of contractions, slight to moderate vaginal bleeding, cervix closed.

Inevitable abortion: Uterine size still corresponding to gestational age, but very clear contractions (cramplike pain), nascent dilatation of the cervix, mild to severe bleeding, but no placental tissue yet visualized.

Incomplete abortion: Uterine size smaller than gestational age, well contracted, placental tissue or embryonic tissue in the dilated cervix or within the vagina.

Complete abortion: Uterine size nearly back to normal, well contracted, little pain, cervix closed, little bleeding, no more clotting, bleeding from the cervix is light red.

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Management

Threatened abortion

- complete bedrest for at least 3 d, observing the PV bleeding (ask to change pads regularly))
- after the bleeding has stopped and the patient has been discharged there should be no sexual intercourse until the next medical check-up!
- in late threatened abortion: oral magnesium tds if available.

Note: the less the lower abdominal pain the better the chances to keep the pregnancy.

Inevitable and incomplete abortion

Procedure

- put up an iv drip, take blood for Hb, Hct and blood group (Rh factor)
- in severe hemorrhage: give 3 IU oxytocin as single shot in order to provoke complete expulsion
- Note: Never give ergometrine Amp iv unless you are sure that the uterine cavity is empty! (acts by closing the cervical os)
- prepare for curettage: if cervix is sufficiently dilated (ie one finger passing through the internal os and up into the uterine cavity is easily accommodated) and placental tissue is already in the vagina, you can do it without general anesthesia by giving 50-100 mg pethidine iv, eventually followed by 10 mg diazepam iv
- providing that the cervical dilatation allows, empty the uterine cavity by digital "curettage" with your middle finger; if not;
- do instrumental curettage
- give uterotonics to obtain a well-contracted uterus (prevention of infection!)
  oxytocin iv reacts quickly but is rapidly metabolised; overdosage not possible!
  ergometrine (methergin) acts slowly but maintains a longer and better contraction provided the uterine cavity is empty.

  Be careful in hypertensive patients! ergometrine raises the BP by 10%.

- keep patient under observation (temperature) and on bedrest for 24 h; esp if she has traveled a long distance for treatment.
- Anti-D iv or im should be given if patient has a Rh-negative blood group (this comprises only 5% of patients in Africa!) and if the gestational age was over 8 wk. It should only be given, however, during the first 72 h following the onset of PV bleeding.

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1.2 Septic abortion

Infected uterine cavity following prolonged incomplete inadequately treated abortion or "criminal"/ "unsafe" artificially induced abortion.

Signs

- increasing lower abdominal pain
- temperature > 38^0
- slight to severe vaginal bleeding non-clotting - putrid - pinkish
- BP low , Pulse raised (flat)
- shivering, tachypnoea, restlessness.

Management

- iv-line and sufficient fluids (Ringer/Lactate and dextrose)
- take blood for HB, Hct, grouping and cross-matching, include. "thick film" to rule out malaria (might be both bacterial and malarial infection!)
- antibiotics iv if possible for start (broad spectrum antibiotics including anti-anaerobes: e.g. ampicillin 2-6 g/24 h + metronidazole 500 mg iv bd (12 hourly)
- if available 2500-5000 IU of heparin iv to prevent DIC.
- do careful curettage under general anaesthetic and high dosed uterotonics (as repeated bolus-injections or in an iv drip e.g. up to 20 IU oxytocin)
- in Rh-negative patients give Anti-D.

Note: Cases with signs of peritonitis (suspicion of perforation of the uterus during criminal abortion!) are best referred to the nearest center for specialist treatment.

1.3 Hydatidiform mole

Hydropic degeneration of the chorion (white, grape-like vesicles) with varying incidence: about 1:2000 pregnancies in the U.S.A., approx. 1:1500 in Africa, but 1:100(!) in East Asia, including the malignant change termed malignant mole, chorio-epithelioma, choriocarcinoma or GTN (gestation trophoblastic neoplasm).

Signs

The size of the uterus does not correspond with the duration of amenorrhoea. The uterus is very soft; absence of FHB (Fetal heart beat) no embryo on ultrasound, "snow flurry" instead; HCG level (hyperemesis); bilateral cystic enlargement of the ovaries (FSH, LH overstimulation - lutein cysts).

Management

As soon as contraction and expulsion of vesicles starts: oxytocin-drip iv (10-20 IU in 500 ml 5% glucose); if available: prostaglandins (e.g. sulproston 2 Amp/1000 ml NaCl in 10 h, starting slowly because of side-effects!) ; prepare for careful curettage (high risk of perforation!); cross-match blood in severe hemorrhage for transfusion; give antibiotics prophylactically (ampicillin, cephalosporines) for 3-5 d; continue uterotonics (ergometrine) until uterus is behind the symphysis; control HCG levels weekly until 3 times negative! do CXR to rule out pulmonary metastasis.

CORDA

POSTNATAL CARE

3.0 Postnatal Care

3.1 Infection Prophylactics in Newborns

In countries with high prevalence of gonorrhea the general application of 1% silver nitrate (Crede method) is still important though it will not be protective against keratitis caused by Chlamydia. Alternatively tetracycline eye ointment (1%) can be given covering Gonococci as well as Chlamydia.

3.2 Neonatal and Postnatal Health Hazards

Many women leave the obstetric center just after or within 2 days of delivery, mostly on foot and for long distances. Certainly they are supported by their clan or tribe, but they won't be spared from work for long. In urban areas family structures have often fallen apart with resulting (physical) stress for the single woman. Consequences of these conditions are protracted involution of the uterus, particularly in multigravidas, with danger of bleeding or infection also of injuries during delivery, mastitis, malaria - and for the infant, retarded growth and failure to thrive.

3.3 Involution of the Uterus

Normally the uterus of a nursing mother will be palpable over the symphysis pubis up to the 10th to 14th day after birth, and up to 3 wk after section. An uterine subinvolution, i.e. delayed physiological uterine shrinking, can happen in spite of nursing due to lack of sleep or too much physical strain (or if the placenta was incomplete).

Findings

Soft and high-standing uterus (although the bladder is empty), susceptible to pressure, small and odorous lochia or regular, persistent fresh, often quite substantial bleedings; possibly elevated temperature.

Therapy

- soft (!) massage of abdominal wall and uterus
- uterotonics (oxytocin! Cave: methylergometrine suppresses milk secretion and causes cervical spasms)
- spasmolytics in lochia retention
- avoid stress for the mother
- mother should continue breast-feeding (
- care for good digestion and clean sanitary towels
- antibiotics may be indicated.

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If not treated properly, endometritis and parametritis or childhood fever (high fever, lochia, malodorous uterine subinvolution) with possible coagulopathy or haemolysis can arise. In such cases (and in mere suspicion) of infection, the uterine cavity should be cleaned carefully with a large and blunt curette (danger of rupture) and combined high-dose antibiotics (amoxicillin plus gentamicin, metrondiazole plus cephalosporine) administered; ultimo ratio: laparotomy, hysterectomy.

3.4 Galactostasis

When feeding, the infant should drink from both breasts (begin by alternating), and afterwards - as a good protection against infection - some milk should be squeezed out, spread on the nipples and allowed to dry. Painful fissures (rhagades) of the nipple can make the mother prefer the side which hurts less with even more troubles resulting from congestion of milk in the breast (galactostasis).

Management

- observe during nursing if the baby really suckless and can get the nipple in his mouth
- keep hands and breasts clean; do not apply soap to the nipples
- try different nursing positions, so that the baby does not continuously suckle on a present fissure
- let the most sore breast first be emptied before changing to the "easy" side (for 1 d)
- warm up the breast before nursing (hot fomentations) to stimulate milk flow; do vice versa (cold compresses) when the feeding is finished, but be careful when windy (fan!)
- put sugar or glucose on the fissures (desinfection by microbial processing glucose into alcohol or lactate as well as by high osmolarity)
- checking weight of baby and temperature of mother.

3.5 Mastitis

Inflammation of mammary gland: galactostasis, reddening of the breast (beginning at the nipple), pain.

Procedure

- as above (galqactostasis) plus bedrest
- antibiotics in case of severe infection (> 39^0 C and other therapy (see above) so far ineffective. Do not use tetracycline!)
- continue breast-feeding!

In case of aggravation (high temperatures, abscesses):

- weaning and caring for alternative feeding!
- surgical treatment and antibiotics.

CGRDA

Dr. Bekele Chaneso

SEXUALLY TRANSMITTED DISEASES

INTRODUCTION

The Venereal Diseases Regulation of 1916 provided a framework for the nationwide network of clinics which developed in many parts of the world after the First World War. The regulation stated that the treatment of Venereal disease should be: confidential and free of charge. The Venereal diseases were; syphilis, gonorrhoea and chancroid.

The principles still apply and syphilis, gonnorrhea and chancroid remain the legally defined Venereal diseases.

After the war patients began to attend in increasing numbers with other conditions. Men came with non-gonorrhoeal urethritis, warts, genital herpes and parasitic conditions such as scabies and pediculosis. Women came with vaginal discharge due to trichomoniasis and candidiasis. It was considered helpful to replace the name Venereal with similar name with less stigmata attached to it, so the name Sexually Transmitted Diseases was introduced. Now it is being replaced by the term Sexually Transmitted Infections.

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EPIDEMIOLOGY AND CONTROL

SYPHILIS

The incidence varies from country to country but the general trend was decreasing. Currently with the epidemic of HIV/AIDS its incidence is increasing.

GONORRHOEA

After it increased dramatically until 1970 then it levelled out and fairly stayed steady. More than 10 million cases of gonnorrhea are reported yearly to WHO.

The incidence of other STDs is not well known.

Factors associated with high risk of STDs:

1. Fundamental factors
   . Acquisition of infection from one partner and transmission to another;
   . Availability of multiple sexual partners
2. Medical factors
   . Women with asymptomatic disease;
   . Homosexual men with asymptomatic disease;
   . Modern treatment: simple, quick, may encourage risk of infection but antimicrobial resistance leads to treatment failure and spread of infection.
   . Modern contraceptive: IUCD and oral contraceptive bar the sperm but not the germ, unlike barrier methods.
3. Social factors
   . Population movement;
   . Increasing affluence;
   . Alcohol consumption;
   . leisure;
   . Prostitution
   . Personal freedom;
   . ignorance: failure to recognize infection, continuing partner change despite infection.

High risk groups for STDs:

1. Age group: 20-24 years for both sexes;
   20-34 " for men;

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16-24 " for women

2. Frequent travellers;

3. Prostitution;

4. Homosexuals;

5. Occupation: armed forces, merchants, crew, entertainers before the public in supporting services.

N.B. These infections affect all socio-economic groups and no one is immune.

CONTROL: There are three main branches to control:

1. The clinics;

2. Contact tracing;

3. Education.

The clinics: The clinics provide the foundation of control. The work of the clinic is a good medical practice and comprises of;

1. accurate diagnosis by clinical and laboratory investigation: using Syndromic approach;

2. effective treatment;

3. follow-up to insure treatment is effective;

4. contact tracing.

1. Contact tracers:

A. Interview the patient to:

. ensure the patient has adequate knowledge of the condition to co-operate;

. establish the at risk contacts;

. motivate the patient to persuade contacts to attend for examination and, if necessary, treatment.

. re-interview the patient when attending for follow-up to check on the progress action and see if remembered more contacts.

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B. Secure the attendance of defaulting from follow-up;

C. Occasionally go out into the community to find defaulters and contacts.

Contact tracers must be tactful, dedicated, persevering, courageous and resourceful.

2. Education: Clinical work and contact tracing only play part in the control of STDs once the patient comes to a clinic. It is important that public know:

a. clinical features of common STDs;

b. how the diseases are acquired;

c. where to find the clinics;

d. that the treatment at a clinic is free and confidential;

e. attendance at a clinic is similar to attendance at any other out patient department.

Where and when to educate the public?

In theory the best place is school because almost every one can be reached; information can be provided before sexual activity occurs. The drawback is that this method is not accepted by the authorities and the church.

3. Clinical Examination: Clinical examination emphasizes on genital and related factors. The principles are:

a. history

. history present illness;

. general health;

. recent treatment;

. sexual contact...marital & extramarital, regular & casual; genital, oral and anal;

. past history of STDs;

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. family history;

. drug hypersensitivity;

. in women, menstrual history, pregnancies and their outcome.

N.B. Patients should be allowed to tell their story in their own words and leading questions must be avoided.

b. physical examination:

Men: complete physical examination must be done. If you suspect syphilis, especial attention should be given to;

. skin and body hair;

. lymph nodes;

. perianal region;

. mouth, teeth & pharynx;

. pupils, optic fundi, cardiovascular system, and central nervous system.

If urethral discharge is present, its colour and consistency must be noted. Specimens must be taken for microbiological study.

Women: Explain to the women what you do;

. lithotomy position is preferred;

. inspect the skin over the inguinal region, supra-pubic area, thighs, perineum, perianal region and vulva;

. labia minora is parted and the introitus carefully examined;

. each labia majora must be palpated for thickening of Bartholin's glands;

. speculum examination must be performed.

Men and women: examination of ulcers...size, shape, position, and degree of tenderness;

. the base of the ulcer must be palpated for

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induration;

. Regional lymph nodes should be examined for enlargement;

. a genital ulcer could be due to syphilis, chancroid, LGV, granuloma inguinale, HSV type 2, TB, cancer, scabies or other diseases.

3. Collection of samples for laboratory examination:

For gonorrhoea: Gram stain, culture, wet mount (trichomonads)

For syphilis: Dark field examination, serological tests: VDRL, TPHA, FTA_ABS.

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SYPHILIS

Syphilis is a chronic, infectious, systemic disease caused by organisms called *Treponema palladium*. Syphilis is classified into acquired and congenital.

Acquired syphilis is divided into:

1. Early....primary

secondary (3 to 6 weeks)

early late

2. Late....late latent

tertiary (gumma and takes 10 years to develop)

quaternary syphilis.....CVS & CNS

Congenital syphilis could be early, late and stigmata or scars.

Late syphilis is disease which is diagnosed two years after infection. The lesions during the first two years contain many treponemas and are infectious. In late stages there are few treponemas and the disease is non-infectious.

HISTOPATHOLOGY OF SYPHILIS

The basic changes are essentially the same in all stages of the disease. There is perivascular infiltration with lymphocytes and plasma cells and endothelial proliferation. This end arteritis results in occlusion of the blood supply leading to loss of epithelium and ulceration and ulceration of primary lesion of acquired syphilis, mucosal ulceration and scaling of the long lasting papules in secondary syphilis, the necrosis and ulceration of gummatous syphilis and some of the tissue damage in cardiovascular syphilis and neurosyphilis. Healing is by fibrosis and scarring which leads to deformity which is more marked in late syphilis.

PRIMARY SYPHILIS

.Incubation period is usually 2-4 weeks, but it could be 9-90 days. It commonly presents as a genital ulcer called primary chancre. The chancre are found on the penis, anal, anal canal or rectum in males and vulva or the vagina in females. Homosexuals could have chancre on their lip.

The chancre is usually single, begins as a dull red macule and soon becomes papular and ulcerates. The classical chancre is painless, non-tender, rounded, has a well-defined margin, an indurated rubbery base and produces serum when traumatized.

The regional lymph nodes are often involved and they are only moderately enlarged, discrete, rubbery in consistency, painless and non-tender.

Investigations: Dark-field microscopy

Serum for VDRL, TPHA, FTA-ABS, TPI

Treatment:

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Benzathine pen 2.4 million iu im stat OR

Procaine pen 600,000 iu im daily for ten days.

Erythromycin 500 mg P.O. 6_hourly for two weeks for allergic patients to penicillin.

SECONDARY SYPHILIS

The common presentation of this disease is a rash. Before the rash is seen there is a prodromal phase. during this phase the patient experiences malaise, headache, generalized ache, and low grade fever for 1-3 weeks before the characteristic sign develops. Rash in 75%, lymphadenopathy in 50%, mucosal ulceration in 30% and involvement of viscera occurs in 10%.

The rash starts on the trunk, spread up to the face and down the limb, characteristically affecting the palms and soles. Most rashes appear on the flexor than the extensor surfaces and symmetrically distributed on both sides of the body. Lesions in the warm and moist areas of the body became large and called condylomata lata.

Skin lesions heal leaving faintly pigmented areas which gradually fade and noticeable depigmentation on the skin of the back of the neck called " Collar of Venus ".

Enlarged lymph nodes may found in posterior cervical chain especially sub-occipital nodes, axillae, supracondylar region, and inguinal region.

Mucosal ulcers also called mucosal patches may coalesce to for so called " snail track " ulcer. Ulceration may affect the mucosa of genitals, mouth, pharynx and larynx.

Diagnosis: clinical

dark-field

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Late congenital syphilis

It is diagnosed by serological tests and may be difficult to distinguish from late acquired syphilis. Presentation includes gummas, asymptomatic neurosyphilis, and CVS diseases. Characteristic, rare and ill-defined features include: interistial keratitis, Clutton's joints, and Hutchinson's triad (deafness, interstial keratitis, Hutchninson's teeth).

Stigmata of congenital syphilis

These occur late in life and include; saddle nose, bulldog face, rhagades, Hutchninson's teeth and Moon's or mulberry molars.

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GONORRHOEA

Cause of gonorrhoea is a Gram negative intracellular diplococcus Neisseria gonorrheoea. The sites of invasion are; anterior urethra, rectum, endocervical canal, pharynx, conjunctivae, and vulva and vagina (prepubertal girls).

The incubation period in men with urethritis is usually 2-5 days with a range of 1 to 10 days. In the newborn with congenital infection, it is usually 2-5 days, but may be up to 13 days.

Clinical presentation

Men: urethritis: sudden onset of burning, and scalding discomfort on micturition;

. purulent discharge;

. injection of meatal mucosa;

. occasionally erythema of glans penis and enlarged inguinal lymph nodes.

Women: No symptoms from 50-75% of women with uncomplicated

gonorrhoea;

. dysuria and vaginal discharge when symptomatic;

. mucoid or purulent discharge from the cervical os;

. rarely frank urethral discharge.

Extragenital gonorrhoea: rectal discharge and tenesmus, purulent discharge with injected mucosa, sore throat, pharyngitis or tonsillitis, brisk conjunctivitis and vulvo-vaginitis.

Diagnosis

Gram stained smear shows Gram negative intracellular diplococci.

Culture confirms the diagnosis.

Complications

Local complications: they may involve any structure lined by columnar epithelium communicating with the ano-genital structures. Local complications cab be either acute or chronic.

1. Acute complications

in men: infection of the pararurethral ducts;

tysonitis;

posterior urethritis;

prostatitis;

vasitis;

vasculitis

in women: Skenitis;

Bartholinitis;

salpingitis;

pelvic infection

2. Chronic complications

in men: urethral stricture

. obstructive symptoms (difficulty on

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micturition, dribbling, poor stream).

. frequency, urgency, and pain.

chronic prostatitis

. pain, urinary symptoms, anxiety etc.

in women: chronic Bartholinitis

pelvic infection....pelvic pain....infertility

3. General complications

bacteraemia, septicemia, perihepatitis, arthritis.

Management

Many gonococci are resistant to penicillin and tetracyclines.

Uncomplicated cases:

. Aqueous proc pen 2.4 mega units im with probenecid 1 m 30 min before taking it (OR)

. Cotrimoxazole 4 tabs P.O. BID for two days (OR)

. Ampicillin 3.5 gm P.O. with probenecid 1 gm (OR)

. Ceftriaxone 250 mg im stat (OR)

. Spectinomycin 2 gm im stat.

Since it is assumed that chlamydia occur with gonococcal infection, the above treatments must followed by tetracyclines 500 mg QID for 7 days.

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TRICHOMONIASIS

Cause: Flagellate parasite *Trichomonas vaginalis*

Trichomonas in females: infestation is common during the period of sexual activity, between 18 and 35 years, than the older and younger women.

Incubation period: 4 days to three weeks.

Clinical presentation: The vagina is involved in most cases. the

patients complain of vaginal discharge (thin, yellow. offensive), vulvovaginitis, pruritus vulvae, dysuria and dyspareunia,

Examination shows: Vaginal discharge which is frothy, reddened mucosa of vagina, vulva and cervix.

Urethral trichomoniasis is present in half of the cases with vaginal infection. This causes dysuria and frequency.

In males: Urethral infection is rarely recognized in men and may produce low grade fever.

Diagnosis

. Wet mount of vaginal discharge from posterior vaginal fornix shows flagellated organisms.

. Culture can also be done.

Treatment

Metronidazole is the treatment of choice. It can be given in one of the following ways;

250 mg thrice per day for 7 days (OR)

2 gm in a single dose (OR)

500 mg twice daily for 5 days.

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CANDIDIASIS

Cause: yeast-like fungus called *Candida albicans*. The main characterstics are vaginitis in women and balanitis or balanoposthitis in men.

Yeasts are normal flora of the mouth and gut. not all candidiasis is sexually transmitted. Yeasts can easily spread from the anus to vulva and vagina. Once established in or on the genitals, they can be transmitted sexually; an asymptomatic

partner can be the source of repeated re-infection.

Incubation period: difficult to determine.

Predisposing factors are:

. Diabetes mellitus;

. Pregnancy;

. Broad spectrum antibiotics;

. Oral contraceptive pills;

. Corticosteroid therapy;

. Immunosuppression (drugs, HIV infection);

. Iron deficiency anaemia.

Clinical presentation:

Patients present with vulvo-vaginal itch or irritation, vaginal discharge, dysuria and dyspareunia.

Examination shows: edema, redness, whitish discharge adhering in lumps to the vaginal wall and cervix (curdy).

Diagnosis

. Gram stain

. KOH preparation

. Culture

Treatment

Antifungal pessaries for women and oral tablets for men and resistant cases.

.Nystatin, Clotrimazole, Miconazole, Econazole

CHANCROID (SOFT SORE)

Chancroid is characterized by genital ulceration and inguinal buboes (enlarged lymph nodes). It is common among the poor and those with poor hygienic conditions.

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Cause: Small Gram negative bacillus *Hemophilus ducreyi.*

Incubation period: Usually 1-8 days.

Clinical presentation

Lesions start as painful, tender papule which soon becomes pustules and breakdown to form shallow ulcers. The ulcers are multiple and painful. Inguinal lymph nodes enlarge in half cases within a week of onset. They are firm, tender and matted together.

Diagnosis

. Gram stain

. Culture

. Biopsy and histology

. Skin test

Treatment

. Cotrimxozale 2 tablets twice daily for 10 days (OR)

. Streptomycin 1 gm im daily for 14 days (OR)

. Tetracyclines 500 mg P.O. QID for 21 days

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GRANULOMA INGUINALE

Cause: Bacteria known as *Donovani granulomatis*

(Calymmatobacterium granulomatis)

Incubation period: from few days to 2 months

Clinical features: The lesions start as a painless papule which progress to form spreading granulomatous ulcer with characteristic

rolled edges. The base of the lesion is usually clean and may vary in colour from pale pink to deep dark, which the surface has a soft velvety appearance. lesions start on the external

genitalia but may spread widely and invade the surrounding skin.

Diagnosis

. Giemsa Stain shows Donovani's bodies.

Treatment

. Streptomycin 1 gm twice daily for 21 days (OR)

. Tetracyclines 500 mg P.O. QID for 21 days (OR)

. Cotrimoxazol 2 tabs twice daily for 10 days.

LYMPHOGARNULOMA VENERUM (LGV)

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Cause: *Chlamydia trachomatis*

Incubation period: 4-35 days

Clinical features: Primary genital lesion is usually single vesicle or papule, it may ulcerate, is painless and non-indurated. Inguinal adenopathy starts between 4 days and 4 months after the primary lesion. Lymph nodes are initially firm, only slightly painful but soon increase, mat together, adhere to the skin become dusky red, softening and fluctuation develops and multiple abscess form leading to perforation of buboes and multiple sinuses.

Patient will have fever malaise, anorexia, nausea & vomiting, variable macular rash and hepatospenomegally.

Complications:

1. Scarring... Leads to healing with fibrosis and distortion eg. penile distortion;

2. Genital elephantiasis: Destruction and distortion of lymphatic drainage leads to: genital elephantiasis;
polypoid growth;
occasional elephantiasis of one leg;

multiple fistulae (vaginal, rectal);

destructive ulceration.

3. Anorectal Syndrome: The main features of this syndrome are: proctitis, rectal stricture, rectal ulceration, rectal fistulae, and perirectal abscess.

Diagnosis

. Swab to culture (primary lesion);

. Culture of pus (inguinal nodes)

. Culture, biopsy, Frei test (late manifestations).

Treatment

antimicrobial like Cotrimoxazole, tetracyclines, erythromycin, and rifampicin can be give at different stages of the disease.

VIRAL STDs

Genital herpes

Cause: Herpes simplex type II

Incubation period: 4-5 days

Presentation: genital ulceration

Sites involved: penis, vulva, cervix

Diagnosis: culture from lesions

Treatment

. Keep lesions clean

. Antiviral agents....iodoxuridinie

acycloguanosine

Genital warts

Cause: DNA virus

Incubation period: 3 weeks to 8 months

Treatment

. podophyllin 5-20% once or twice per week;

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. electrocautery

Molluscum contagiosum

Cause: Pox virus

Incubation period: 3 weeks to several months

Treatment: express the contents;

cauterize

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HUMANIMMUNODEFICIENCY VIRUS INFECTION (HIV) AND ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)

HIV/AIDS is clearly a calamity for the world health, with features unique to the diseases casting a shadow over the world population. The first cases of the disease was diagnosed in 1980 among homosexual men in the USA. It was soon realized that intravenous drug users, haemophiliacs, transfusion recipients, heterosexual males, females and children born to infected mothers developed HIV/AIDS. To day approximately 500,000 cases of AIDS have been reported through out the world. It has been estimated that more than 10 million subjects have been infected by HIV.

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Etiology and epidemiology of HIV infection and AIDS

The availability of information varies from country to country. The US public Health Service projected a cumulative total of 365,000 cases of AIDS by the end of 1992, with 263,000 cumulative deaths. It is believed that persons infected with HIV virus in USA range between 1 and 1.5 million.

In 1996 19,433 cases of AIDS were reported to the MOH of Ethiopia. The true prevalence is said to be about 350,000. It was also stated that about 1.6 million of adults and 120,000 children were infected by HIV virus.

It is difficult to realize that it is only a decade since the

disease since first observation of this strange Immunodeficiency, rare opportunistic infection, and Kaposi's sarcoma was first made i previously healthy young homosexual men. This observation heralded the beginning of one of the most medically, emotionally and politically troubling epidemics of the century.

Definitions

1. AIDS: can be defined generally as the occurrence of a clinical illness consisting of opportunistic infection (Pneumocystis carnii pneumonia) and/or neoplasia (Kaposi's sarcoma associated with Immunodeficiency and caused by the Immunodeficiency virus.
2. HIV infection: presence of antibodies for HIV using laboratory methods.
3. WHO case definition of AIDS in Africa

Major signs: 1. weight loss >105 of total body weight
2. chronic diarrhoea >1 month
3. fever >1 month (intermittent or constant)

Minor signs: 1. persistent cough >1 month
2. general pruritic dermatitis
3. recurrent herpes zoster
4. oropharyngeal candidiasis
5. chronic progressive or disseminated herpes simplex infection
6. generalized lymphadenopathy

ETIOLOGY

The etiology of AIDS is human Immunodeficiency virus, which is currently known to have at least two subtypes; type1 and type2 (HIV-1 and HIV-2). HIV-1 is responsible for most cases of AIDS in the world. The biological features of HIV-1 and HIV-2 are

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similar but the latency to disease might be longer for HIV-2. HIV-2 infection is commonly seen in the Western part of Africa.

The importance of identifying the cause of AIDS included the ability to identify person infected with HIV, the ability more accurately characterize the natural history of infection with the virus and its relation to the disease, and potential screening, prevention and treatment based on the first two items.

Mechanisms of HIV infection

The fact that HIV infection is a retrovirus suggested persistence of infection that may be life long. HIV is an RNA virus whose primary attachment site is the CD4 receptor, which is found on T4 lymphocytes as well as on other cells including macrophages and certain CNS ells.

The virus reduces the number of T4 lymphocytes, thus resulting in a reversed helper/suppressor (T4/T8) ratio.

An enzyme, reverse transcriptase, transcribes the genetic code on RNA of the virus into DNA. The viral DNA may or may not then be integrated into the host cell's chromosomes. The virus may remain in the host cells without the viral genes being exposed and little or no viral proteins being made. Therefore the virus can latent with little or perhaps no circulating virus present, and immune system doesn't recognize infected cells and eliminate them.

Normal cell activation in response to antigens appear to lead to expression of the viral genes by transcription and translation of the genes into viral proteins that are assembled into new viral particle in the cytoplasm of the cells and that are released when the cell divides. The old infected cells usually

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die. The immune system is eventually crippled by the T4 cell loss and other derangements.

TRANSMISSION

HIV has been isolated from: peripheral blood, lymph node, brain tissue, bone marrow, plasma, saliva, retina, cornea, ear secretion, bronchial fluid, semen, breast milk, cervical cells and mucous membranes, synovial fluid, and cervical and vaginal fluid.

Major documented ways of HIV transmission are:

1. Sexual contact....homosexual and heterosexual;
2. Contaminated blood or blood products;
3. Sharing of apparatus: needle and syringes
4. Vertical transmission: in utero, labour, delivery or early neonatal period.

Sexual transmission

. homosexuals in USA;

. male to female in Africa;

Social and cultural changes have contributed to sexual experimentation and freedom. These include oral contraceptives available, decreased frequency of pregnancy, weakening of traditional values, openness about homosexuality and advance in air transportation allowing greater intermingling. The consequences of these have been an increase in many STDs and increased infertility.

It is not only reduction in the number of sexual partners itself that is protective, but other factors such as knowing the partner better and evidence that promiscuous people tend to choose pronounces partner.

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Lowering the number of partners reduces the chances of exposure to a partner having a high risk behaviour.

Protection with condom and spermicide may be useful with a short term, albeit a steady partner.

Perinatal transmission

This occurs transplacentally or from HIV-infected maternal lymphocytes, at the time of delivery by contact with maternal blood or tissue. Post-delivery breast feeding also is incriminated.

N.B. Transmission from other body fluids and familial contacts is not established.

Transmission and health care workers

In USA from August 15, 1983 to April 20, 1989, 1449 1449 health workers were injured:

needle stick.....80%

cut with sharp objects...8%

open wound contamination.....7%

mucus contamination.....5%

37% of the exposures were preventable. in 180 days, 4 (0.34%) were HIV positive (needle stick or cut). At 1988 24 health workers were HIV positive due to accident on work.

In Africa (Zaire, 1986), prevalence of HIV infection in health workers was 8.7%. Among the tested 11.4% wee nurses and 11.8% manual workers.

Natural history of HIV infection

Phases of HIV infection can be conceptualized as: the early or acute phase which lasts for weeks, the middle or chronic phase, which lasts for years and in which changes begin to occur, and the final or crisis stage, which can last months to years.

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After acquisition of HIV, many individuals develop an acute flu-like illness with symptoms commonly appearing in about 2 to 6 weeks. This phase is self-limited, and person enter asymptomatic phase. Antibodies to HIV may appear by three to six weeks and are nearly always present by three months post-infection, although in some it takes six months or longer. This period in which the person is infected nut doesn't demonstrate antibodies is called "window period".

Incubation period

This depends upon:

1. Route by which HIV is acquired
2. Patient factors....age, immune status, presence of other infections
3. Cofactors.....host factors, the organism, the environment, the interaction effect of individual factors
4. Viral factors....viral dose received and virulence
5. Assumption.....estimated rate of disease transmission

Laboratory indicators of disease progression:

1. decline in T4 lymphocyte counts below 200/cubic mm
2. decline in p24 antibody
3. high ESR
4. high levels of beta-2 microglobulin level
5. low RBC count

Diagnosis of HIV

1. ELISA . Widely used and screening test and detects antibodies for HIV.
   . False negatives are low
   . some conditions give false positive results
2. Western Blot: is the most widely used confirmatory test.

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It uses HIV antigen.

3. Immunoflourescence assay (IFA) is an acceptable confirmatory test. It also uses viral antigen and used primarily in research programs.

Recommendations for HIV testing

1. Persons who may have STD
2. IV drug users
3. Persons who consider themselves at risk
4. Women of child bearing age:

. used iv drugs, engaged in prostitution, have sexual partner who is infected, living in a community known or suspected to have high prevalence of HIV, received blood transfusion

5. Person planing marriage
6. Persons underlying medical evaluation or treatment:

generalized lymphadenopathy, unexplained dementia, unexplained fever or diahrroea or weight loss, TB, generalized herpes and chronic candidiasis.

7. Persons admitted to hospitals
8. Persons in correctional systems
9. Prostitutes

Counselling

Tests could be confidential or anonymous.

1. Pretest counselling

. Time: 30-90 minutes

. Purpose: to assist the individual to make an informed choice about testing and prepare the individual for the test.

. Obligation of counsellor: assess individual's level of understanding of the information, assess the potential psychological impact, asses the individuals potential risk of HIV

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infection

2.Post-test counselling:

. voluntary testing

. screen without counselling

Positive HIV testing

. creates a crisis for the individual;

. should be given immediately and factually. response can be anger, fear, guilt and denial.

. it is extremely important to allow the expression of emotion and not to minimize the feeling or attempt to cheer up the HIV positive individual;

. when the individual is ready review

. meaning of the result of tests;

. mode of transmission;

. risk reduction behaviour;

. health promoting behaviour.

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Treatment

No definite treatment is currently available.

1. Prophylaxis against opportunistic infection:

Primary prophylaxis: administration of therapy in the absence of clinically apparent infection in order to prevent its occurrence.

. Co-trimoxazole 2 P.O. BID three times per week (OR)

. Pentamidine 3300 mg once per month (OR)

. Dapsone 100 mg once a day (OR)

. Dapsone+pyrimethamine once a day (OR)

. Fansidar and Zidovudine

are suggested drugs to prevent PCP.

2. Antiviral Therapy:

. On trail

Nursing Care of persons with AIDS

. Skill and Knowledge is the same.

. Multisystem failure and/or multisystem disease is treated.

. Main reason for admission is nursing care.

. Nurses can provide a supportive environment, as well as expert care, nurturing, symptoms control and management and compassion.

. Psychological support, medication, skin care and control of symptoms are very essential components of the nursing care.

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SEXUALLY TRANSMITTED DISEASES

INTRODUCTION

The Venereal Diseases Regulation of 1916 provided a framework for the nationwide network of clinics which developed in many parts of the world after the First World War. The regulation stated that the treatment of Venereal disease should be: confidential and free of charge. The Venereal diseases were; syphilis, gonorrhoea and chancroid.

The principles still apply and syphilis, gonnorrhea and chancroid remain the legally defined Venereal diseases.

After the war patients began to attend in increasing numbers with other conditions. Men came with non-gonorrhoeal urethritis,

warts, genital herpes and parasitic conditions such as scabies and pediculosis. Women came with vaginal discharge due to trichomoniasis and candidiasis. It was considered helpful to replace the name Venereal with similar name with less stigmata attached to it, so the name Sexually Transmitted Diseases was introduced. Now it is being replaced by the term Sexually Transmitted Infections.

EPIDEMIOLOGY AND CONTROL

SYPHILIS

The incidence varies from country to country but the general trend was decreasing. Currently with the epidemic of HIV/AIDS its incidence is increasing.

GONORRHOEA

After it increased dramatically until 1970 then it levelled out and fairly stayed steady. More than 10 million cases of gonnorrhea are reported yearly to WHO.

The incidence of other STDs is not well known.

Factors associated with high risk of STDs:

1. Fundamental factors
   - . Acquisition of infection from one partner and transmission to another;
   - . Availability of multiple sexual partners
2. Medical factors
   - . Women with asymptomatic disease;
   - . Homosexual men with asymptomatic disease;
   - . Modern treatment: simple, quick, may encourage risk of

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infection but antimicrobial resistance leads to treatment failure and spread of infection.

. Modern contraceptive: IUCD and oral contraceptive bar the sperm but not the germ, unlike barrier methods.

3. Social factors

. Population movement;

. Increasing affluence;

. Alcohol consumption;

. leisure;

. Prostitution

. Personal freedom;

. ignorance: failure to recognize infection, continuing partner change despite infection.

High risk groups for STDs:

1. Age group: 20-24 years for both sexes;
   20-34 " for men;
   16-24 " for women
2. Frequent travellers;
3. Prostitution;
4. Homosexuals;
5. Occupation: armed forces, merchants, crew, entertainers before the public in supporting services.

N.B. These infections affect all socio-economic groups and no one is immune.

CONTROL: There are three main branches to control:

1. The clinics;
2. Contact tracing;
3. Education.

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The clinics: The clinics provide the foundation of control. The work of the clinic is a good medical practice and comprises of;

1. accurate diagnosis by clinical and laboratory investigation: using Syndromic approach;
2. effective treatment;
3. follow-up to insure treatment is effective;
4. contact tracing.

1. Contact tracers:

A. Interview the patient to:

. ensure the patient has adequate knowledge of the condition to co-operate;

. establish the at risk contacts;

. motivate the patient to persuade contacts to attend for examination and, if necessary, treatment.

. re-interview the patient when attending for follow-up to check on the progress action and see if remembered more contacts.

B. Secure the attendance of defaulting from follow-up;

C. Occasionally go out into the community to find defaulters and contacts.

Contact tracers must be tactful, dedicated, persevering, courageous and resourceful.

2. Education: Clinical work and contact tracing only play part in the control of STDs once the patient comes to a clinic. It is important that public know:

a. clinical features of common STDs;

b. how the diseases are acquired;

c. where to find the clinics;

d. that the treatment at a clinic is free and confidential;

e. attendance at a clinic is similar to attendance at any

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other out patient department.

Where and when to educate the public?

In theory the best place is school because almost every one can be reached; information can be provided before sexual activity occurs. The drawback is that this method is not accepted by the authorities and the church.

3. Clinical Examination: Clinical examination emphasizes on genital and related factors. The principles are:

a. history

- . history present illness;
- . general health;
- . recent treatment;
- . sexual contact...marital & extramarital, regular & casual; genital, oral and anal;
- . past history of STDs;
- . family history;
- . drug hypersensitivity;
- . in women, menstrual history, pregnancies and their outcome.

N.B. Patients should be allowed to tell their story in their own words and leading questions must be avoided.

b. physical examination:

Men: complete physical examination must be done. If you suspect syphilis, especial attention should be given to;

- . skin and body hair;
- . lymph nodes;
- . perianal region;
- . mouth, teeth & pharynx;

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. pupils, optic fundi, cardiovascular system, and central nervous system.

If urethral discharge is present, its colour and consistency must be noted. Specimens must be taken for microbiological study.

Women: Explain to the women what you do;

. lithotomy position is preferred;

. inspect the skin over the inguinal region, supra-pubic area, thighs, perineum, perianal region and vulva;

. labia minora is parted and the introitus carefully examined;

. each labia majora must be palpated for thickening of Bartholin's glands;

. speculum examination must be performed.

Men and women: examination of ulcers...size, shape, position, and degree of tenderness;

. the base of the ulcer must be palpated for induration;

. Regional lymph nodes should be examined for enlargement;

. a genital ulcer could be due to syphilis, chancroid, LGV, granuloma inguinale, HSV type 2, TB, cancer, scabies or other diseases.

3. Collection of samples for laboratory examination:

For gonorrhoea: Gram stain, culture, wet mount (trichomonads)

For syphilis: Dark field examination, serological tests: VDRL, TPHA, FTA_ABS.

SYPHILIS

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Syphilis is a chronic, infectious, systemic disease caused by organisms called *Treponema palladium.* Syphilis is classified into acquired and congenital.

Acquired syphilis is divided into:

1. Early....primary
   secondary (3 to 6 weeks)
   early late
2. Late....late latent
   tertiary (gumma and takes 10 years to develop)
   quaternary syphilis.....CVS & CNS

Congenital syphilis could be early, late and stigmata or scars.

Late syphilis is disease which is diagnosed two years after infection. The lesions during the first two years contain many treponemas and are infectious. In late stages there are few treponemas and the disease is non-infectious.

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HISTOPATHOLOGY OF SYPHILIS

The basic changes are essentially the same in all stages of the disease. There is perivascular infiltration with lymphocytes and plasma cells and endothelial proliferation. This end arteritis results in occlusion of the blood supply leading to loss of epithelium and ulceration and ulceration of primary lesion of acquired syphilis, mucosal ulceration and scaling of the long lasting papules in secondary syphilis, the necrosis and ulceration of gummatous syphilis and some of the tissue damage in cardiovascular syphilis and neurosyphilis. Healing is by fibrosis and scarring which leads to deformity which is more marked in late syphilis.

PRIMARY SYPHILIS

.Incubation period is usually 2-4 weeks, but it could be 9-90 days. It commonly presents as a genital ulcer called primary chancre. The chancre are found on the penis, anal, anal canal or rectum in males and vulva or the vagina in females. Homosexuals could have chancre on their lip.

The chancre is usually single, begins as a dull red macule and soon becomes papular and ulcerates. The classical chancre is painless, non-tender, rounded, has a well-defined margin, an indurated rubbery base and produces serum when traumatized.

The regional lymph nodes are often involved and they are only moderately enlarged, discrete, rubbery in consistency, painless and non-tender.

Investigations: Dark-field microscopy

Serum for VDRL, TPHA, FTA-ABS, TPI

Treatment:

Benzathine pen 2.4 million iu im stat OR

Procaine pen 600,000 iu im daily for ten days.

Erythromycin 500 mg P.O. 6_hourly for two weeks for allergic patients to penicillin.

SECONDARY SYPHILIS

The common presentation of this disease is a rash. Before the rash is seen there is a prodromal phase. during this phase the patient experiences malaise, headache, generalized ache, and low grade fever for 1-3 weeks before the characteristic sign develops. Rash in 75%, lymphadenopathy in 50%, mucosal ulceration in 30% and involvement of viscera occurs in 10%.

The rash starts on the trunk, spread up to the face and down

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the limb, characteristically affecting the palms and soles. Most rashes appear on the flexor than the extensor surfaces and symmetrically distributed on both sides of the body. Lesions in the warm and moist areas of the body became large and called condylomata lata.

Skin lesions heal leaving faintly pigmented areas which gradually fade and noticeable depigmentation on the skin of the back of the neck called " Collar of Venus ".

Enlarged lymph nodes may found in posterior cervical chain especially sub-occipital nodes, axillae, supracondylar region, and inguinal region.

Mucosal ulcers also called mucosal patches may coalesce to for so called " snail track " ulcer. Ulceration may affect the mucosa of genitals, mouth, pharynx and larynx.

Diagnosis: clinical
dark-field
serology (always positive)

Treatment: Procaine pen 600,000 iu im daily for two weeks OR
Benz pen 2.4 million iu im weekly for three weeks.
Erythromycin 500 mg P.O. QID for three weeks

TERTIARY SYPHILIS

It occurs 3-10 or more years after the primary stage of the disease. It is benign gummatous syphilis seen on the skin, mucous membranes, subcutaneous and submucus tissues, bones, joints and ligaments.

Treatment: Same as above.

CONGENITAL SYPHILIS

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This type of disease is transmitted from mother to the fetus through the placenta. It can be prevented by serologically testing all pregnant women.

Early Congenital syphilis

The new born will have rash on the palms and soles, failure to thrive and loss of weight, mucosal ulcers, lymphadenopathy, hepatosplenomegaly and bone diseases. Asymptomatic neurosyphilis and in the eyes choriodoretinitis could occur.

Diagnosis

. Dark field microscopy;

. Serological tests, could

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CONCEPT & RATIONALE OF FAMILY PLANNING (FP)

By Befekadu Demmissie

I. Introduction

Pioneers of FP programmes at different corners of the world had suffered for its cause; service delivery points labeled as FP clinics were stoned because of religious, cultural, socioeconomic and other misconceptions bestowed upon concepts of FP.

However, a growing concern continued to sporadically spread on the understanding of the negative relations between population sizes and socioeconomic developments among various sectors of world population. This was a turning point in the history of Family Planing following series of international conferences held on population ever since the conference in BUCHAREST in 1974, and the ALM-ATA Primary Health Care Conference held in the Soviet Union in 1978.

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The current increase of world population by 87 millon annually has been recorded the fastest ever since and more is to occur in the years to come. More serious is the fact that the developing countries account for 95 percent of the world's annual population growth[1].

Rhetoric facts on world's population growth reflected that the time it takes to double itself has been getting progressively shorter and shorter. To this end, observations on past trends revealed that the world population which was one billion in the eighteen thirties took about 100 years to double itself to two million in 1927[2]. Whereas, the current population size of developing countries has been on the `average projected to double in about 30 years to come as opposed to the more or less 200 years of developed countries[3].

However, there is very little that the world, especially the developing countries will provide to meet the needs of the sky rocketing size of their population's that merged from a growing stress on environment signaled by worn-out farmlands, eroded hillsides, polluted water, parched grasslands, treeless ranges caused by urbanization, search for grazing lands, looking for fire woods and other uses etc. To this effect, each year about 17 million hectares of tropical forest vanish[1].

And yet, there are deep rooted traditional, cultural and religious out looks of people in the developing countries, that aspire for large family size; thus giving little care to the right of the child for food, clothing, health service, education, employment and self esteem. Even the woman's right to decide upon her reproductive health is looked down in the community. As a result, a women is compelled to live to term with pregnancies that would have been caused from rape, and/or unprotected sexual intercourse either intended or not.

Documented facts also reveal the grave situations in which mothers, infants and children in the developing countries are living in. Demographic and health survey findings show that deaths from complications of pregnancy and delivery were estimated at 10 to 30 percent of all deaths of women in the reproductive age.

However, in the developing countries, more than 500 maternal deaths per hundred thousand live births were estimated; and infant deaths were estimated to range from 35 both in Asia and Latin America to 200 in Africa per thousand live births.[4]

Causes attributed to the problems cited were;

Pregnancies - before age 18 years

- after age 35 years

Births more than four and, spacing of pregnancies less than two years.

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However, traditional practices of contraception have been in effect through out history, and is still in practice today despite the availability of modern contraceptive methods. Ever since, traditional contraception has contributed to the development of modern contraceptive methods; even though traditional practices have-been mainly associated with:

- Behavior that may directly or indirectly affect fertility but is not necessarily practiced with the intention of spacing children.
- Religious observance or taboo
- Intentional use of locally available plants and substances for the purpose of controlling fertility.

II. The Concepts of Family Planning

In view of all the above, and to bring a better understanding and acceptance of FP among various sectors of the world's people, FP has been defined by the World Health Organization (WHO) in 1970 as:

- To prevent unwanted pregnancies.
- To decide/plan/ on the number of desired children.
- To regulate the interval between subsequent pregnancies.
- To control pregnancies with regard to the age of fertility.
- To limit the number of children desired to ones economic capacity.

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Therefore, different countries at different Regions of the world, launched FP programmes from the view point of three rational.

- Health
- Population Explosion
- Right of the individual.

IV Discussions

First and most, it should be realized that women would equally suffer as men from health problems, Socioeconomic constraints and other natural and man made calamities. Whereas, at no circumstances would the males physically suffer from pregnancy and, pregnancy related health problems.

However, women have no say as such upon their reproductive health choices. As a result of this, they are compelled to live to term with the pregnancies that they may not want to happen or continue to develop. Usually, pregnancies that were not intended or wanted lead to:

- attempting unsafe and criminal/back yard/abortions;
- abandoning parents, community and birth places that were lived long;
- becoming school drop out;
- getting engaged in professions that are looked down by societal norms;
- abandoning the offspring if not aborted but born alive.

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More serious would become the case if the attempted abortion is complicated. Many a time, unsafe or backyard abortions end up in maternal mortality from hemorrhage, sepsis as a result of spread of infection from the uterus, abdominal Cavity etc. Or, one may end up infertile for the rest of her life from in injuries to the uterus. Other health problems such as fistula (a break in the wall between the vagina and the urinary bladder, or the anus because of wrong intervention) may result which ends in outcast of the woman from the society.

Hence, the prevention of unwanted pregnancy and the right of the individual to make choices on her reproductive health would in one way or the other is believed to have minimized the occurrence of any one of the complications from unwanted pregnancies. Even more, it would create an environment in which the woman will actively participate in the enhancement of Socioeconomic developments.

And yet, it was cited that, half or more of women among those asked on their reproductive intentions outside Sub-Saharan Africa do not want to have any more children. Whereas, the desire among women in sub-Saharan Africa reflected much larger families than woman in other regions. To this effect, the desired number of children in Sub-Saharan Africa on the average was five or more compared with only two or three in most other countries[5].

The dying of mothers is believed to steadily climb as the number of births increase. Sinc every pregnancy entails some risk, it is believed that the life time risk of a woman can b reduced at least by reducing the number of pregnancies through family planning progra interventions[6].

Further more, estimates depict that about 200,000 maternal deaths could be avoided women chose to have their children within safest years with adequate spacing betwe births and completed families of moderate size; and also believed that about 5.6 mill

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enfant deaths could be avoided. In either case, 50 percent of the half million annual maternal mortalities and 10.5 million of infant deaths would have been prevented.

In light of the above, the call for empowering women to decide on their reproductive health is not something to be looked against the consent of the male counterparts; rather it should remain the right of women to prevent themselves from risks of pregnancy and pregnancy related complications.

Concerning the ages at which mothers bear children, the two cut-off points, young (before the age of 18 years) and elderly (after the age of 35 yrs) were commented upon as being too early or too late. Hence, it is stated:

> *" Children born to very young or very old mothers are least likely to survive. Very young women have not yet reached reproductive maturity. Young women are less emotionally and socially prepared to provide optimal infant and child care. Older mothers are more stressed by the biological demands. Older maternal age is a major determinant of child survival. As the mother's age increases, so does the risk of still births and abortions (pregnancy wastage), and infant and child mortality....."*[6].

Far and more, population growth has been stipulated as to have affected the environment. It was said that *" Rapid population growth burns nature's candle at both ends-generating more consumers while reducing natural productivity"*[1].

Hence, the might and importance of FP to the well being of mothers and children and, the environment at large should be applauded.

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Reproductive Health (RH)

1 What does RH mean ?

2 What are the similarities and differences of WHO's approach of :-

- Safe-motherhood programme
- Mother-baby package
- Mother-baby package hospital institutions
- Reproductive Health

3. Why dose maternal mortality remain so high in Ethiopia ?

4. Are deaths during pregnancy and child birthavoidable ?
Explain !

5. What attempts have been made to reduce the frequency of unsafe abortion ?
6. Why do so many deliveries take place at home ?
7. Sholud mothers be encouraged to deliver at health facilities ?
8. What weakend the relationship between antenatal care and delivery services ?
9. Danger signs of pregnancies and deliveries are not well recognized by mothers, TBAs and even by some health workers. How should this vital information be communicated better ?
10. What should be the role of the communityin the implementation of safe mother-hood programme ?
11. Should home based services be promoted ?
Such as, Delivery ? Postnatal ? FP ?
12. Do clinic based providers have the technical competence to offer EOC ?
13. What are the different EOC to be offered at each level of the health facilities ?

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14. What do you think the government must do to have universal access of FP services to all in need ?
15. Unsafe abortion is one of the indications of unmet need of FP? Explain !
16. What is meant by post abortion FP ?
17. What are the major programme components of Comprehensive RH ?
18. What are the guiding principles of RH and FP ?
19. What are the operational principles of of RH ?
20. How can we get a highly motivated, committed and with a shared vision staff ?
21. Do you think that the health organizations in this country have clear vision and mission ?
22. What do we understand by Community ownership approach and participation in decision making in the health delivery system?
23. Enumerate how the community participate ?
24. Give at least five ways how an organization can promot FP services ?
25. When is a program considered sustainable ?
26. If you could have three wishes granted to improve the health of the community you serve, strengthen it, make it better, more sustainable what would they be?

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TRADITIONAL AND NATURAL FAMILY PLANNING (NFP)

By Befekadu Demmissie

1 TRADITIONAL FAMILY PLANNING METHODS (TFP)

Introduction:

Traditional family planning methods are also known as non-fertility awareness methods. They have been used throughout history and are still being used today , despite the availability of modern (man made) contraception. Some use locally available plants and substances and others have a behavior that may directly or indirectly affect fertility but is not necessarily practiced with the intention of spacing children. Usually they are practiced because of habits, tradition, beliefs, or other factors. Passed from generation to generation as a norm of a certain culture in a community.

What makes them different from the Natural Family Planning methods (NFP) is that, TFP is not directly related with signs and symptoms of the fertile or infertile days of a woman's menstrual cycle[1].

In view of the above the following are few among the very many that have been categorized as traditional contraceptive methods[1].

1.1 Plants and other substances

The World Health organization (WHO) has been compiling information on the use of traditional contraceptives and abortifacient and has found references to the use of over 500 different plants and substances in Africa[1].

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1.2 Behavior /Cultural Patterns

1.2.1 Coitus interruptus / Withdrawal:

This is the practice of ejaculating the semen outside the vagina during orgasm by the male partner at the time of sexual intercourse. Its practice can be traced to the time of the Genesis (Genesis, chapter 38, numbers 8 to 12).
This method is probably the oldest contraceptive coital techniques.

The technique is that, a man withdraws his penis from the woman's vagina prior to ejaculation and ejaculates the semen away from the female genitalia in order to prevent its deposition in the vagina.

However, the man must have been first motivated, acquired the discipline and ability to predict the time of ejaculation. One should note the interference of withdrawal with sexual pleasure in one way or the other.
Withdrawal requires no drugs or devices. It is always available at the interest of the couple and used widely.

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Effectiveness:

The lowest expected failure rate is 4/100 woman (Contraceptive Technology International Edition, 1989).

1.2.2. Breast Feeding:

It is also known as Lactational Amenorrhea. Its protection against pregnancy has been known since time immemorial. Its basis for the prevention of ovulation/ against pregnancy has a proved scientific basis.

That is to say, the sucking of the baby on the mother's nipple sends messages to the pituitary gland which prevent the production of gonadothropins FSH and LH and so stop ovulation. It is not the production of breast milk which is important, it is the frequent sucking at the nipple. Where this occurs through the day and the night, whenever the baby wishes (Demand Feeding). In order to encourage full lactation to become established, the knew baby should be put to the breast as soon after delivery as possible;then the baby will get colostrum. Colostrum is of vital importance to the baby as it contains a high concentration of maternal antibodies and other substances which protect the baby from infections. Immediate suckling will also help the important bonding process between mother and baby. The stimulus of sucking also causes the release of prolactin from the pituitary to ensure the secretion of milk, and of oxytocin to help the flow of milk [1,2,5].

Studies carried out on the effectiveness of breast feeding on preventing pregnancy has been attributed to:

- The frequency of daily suckling episodes, and the persistence of uninterrupted amenorrhea.
- The introduction of supplementary feedings which interferes with the frequency of sucklings and inhibition of the ovulatory process.

Breast feeding has played a major role in fertility control through out the world, however, it's high reliability is put in question because of the reasons mentioned above. Therefore, It is advisable if the health worker explain on the conditional importance of backup method along with breast feeding.

Effectiveness:

Risk of pregnancy during lactational amenorrhea is very low. less than 2% in first 6 months postpartum if fully

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breast feeding; less than or equal to 7% in first 12 months. If the fully or nearly-fully breast feeding woman remains amenorrheic, her risk of pregnancy is about the same with other modern contraceptive methods.

1.2.3. Abstinence:

This method is a voluntary decision requiring much discipline and motivation.

- Reasons for abstinence include:-
- Lack of opportunity
- Cultural taboos
- fear of pregnancy
- fear of disease
- preference
- Illness or injury
- Unwillingness of partner
- Sexual disfunction
- Lack of privacy
- Emotional stress

In general, it the practice of avoiding sexual intercourse when necessary (such as Fasting and Saint's days, postpartum days, mourning, etc;)

A FP service provider may be in a unique position to assess whether an individual is comfortable with maintaining abstinence or if it is the cause of result of a negative situation which may require intimate follow up and be helped by appropriate intervention.

1.2.4. Infublation:

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This is one of the three basic ways and most severely performed female circumcision. In this procedure, the clitoris, and the labias are removed and the vaginal opening is almost entirely closed (Pharaonic Circumcision; as it is called in the Sudan)[1].

1.2.5. Values Placed on Virginity:

This practice is equally abstinence. However, it is bound to informally established norm of a particular community whose girl (that never had practiced sexual intercourse) is expected to get abide by until she is married; to it are attached merits and respect of varying value.

1.2.6 Polygamy:

Reinforces effects of post partum abstinence by providing husbands another sexual partner/ out let.

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2. Natural Family Planning Methods:

To provide NFP service effectively, health workers need to have a good knowledge of NFP methods. Therefore, this paper attempts to give a clear understanding of:

- What NFP is,
- How it works,
- How effective it is,
- The risks and benefits of NFP,
- The advantages and disadvantages of NFP
- How, as a FP motivator and/or service provider one can communicate information on NFP to clients in a way that is acceptable, and understandable.

FP service providers should note the fact that couples vary in their family planning needs and preferences. Therefore, it is important for family planing programs to offer as many different methods of fertility regulation as possible so that people can choose the method that most suites their needs; among which, one is Natural Family Planning (NFP) . It is particularly appropriate for people who do not wish to use other methods for medical reasons or because of religious or personal beliefs.

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Unlike women, men do not have cycles of fertility and infertility. Instead, most men are fertile from the time of puberty until about the age of 70. During this time, they continuously produce sperm, or male sex cells, which can fertilize the woman's eggs. Current research indicates that after sperm have been ejaculated from the man's penis into the woman's vagina, they can fertilize an egg for approximately *three* days (in some cases sperm may live up to 5 days).

Thus, unless there is some medical evidence that a man is not fertile, or does not produc sperm that are capable of fertilizing an egg, it should be assumed that he is always fertile.

To understand how pregnancy occurs, and how it can be achieved or avoided, both th man's and the woman's fertility must be considered[2].

a. Man's fertility

- Men produce sperm continuously.

- The sperm cell is potentially capable to fertilize the ripen egg that it gets in contact within 72 hours of its ejaculation. When the man's sperm is ejaculated into the woman's vagina, it can live for up to 120 hours (5 days).

b. Woman's fertility

- Women ovulate only once during each menstrual cycle.
- After ovulation, the egg lives for up to 24 hours. (Very rarely, a second ovulation occurs within 24 hours of the first ovulation.)

The length of time a sperm can live, and whether or not it can fertilize the egg depend mainly on the kind of the cervical mucus the woman is producing when the sperm is ejaculated into her vagina.

The key factor in using Natural Family planning methods are motivation and knowledge. It therefore implies a need to inform educate, encourage and supervise those who are interested in using these methods.

NFP method is a scientific means by which couples can study and determine the fertile and infertile phases of the menstrual cycle so as to prevent or achieve a pregnancy. It is scientific in a sense that it follows the natural physiological patterns of the menstrual cycle. It is under the influence of oestrogen and progesterone that the mucus secreted from the crypts of the cervix undergoes cyclical changes.

In the usual cycle of around 28 days, during the days immediately following menstruation, the mucus forms a thick, viscid plug which occludes the cervix. Under the influence of the rising level of oestrogen, the mucus gradually changes, first to a thick viscid substance which begins to come down the vagina and appear at the vulva and subsequently to a thin,

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watery, highly lubricative elastic substance which flows more freely. These changes are best developed around the time of ovulation. The "peak", which is the last day of the thin watery elastic mucus, can only be recognized retrospectively. This has been shown to occur from three days before to two days after ovulation as suggested by measurement of hormonal changes. After ovulation, under the influence of progesterone the mucus becomes thick and viscid again.

Therefore, natural family planning refers to methods for planning or preventing pregnancies through enabling couples to observe, understand and interpret the naturally occurring changes of signs and symptoms in the fertile and infertile phases of the menstrual cycle. Hence, NFP does not refer to the naturalness of sexual abstinence without using man made contraceptives. Rather, it implies to the *MONITORING OF NATURAL PHYSIOLOGICAL SIGNS AND SYMPTOMS TO DETERMINE THE FERTILE PERIOD IN A WOMAN'S MENSTRUAL CYCLE*[2].

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To use the NFP method it is important to :

- Have scientific knowledge of the structure and functioning of the male and female reproductive organs
- Understand and interpret the signs and symptoms that occur naturally during the woman's menstrual cycle.

There are four NFP methods and *most* reliable ones are three:

2.1 Billings ovulation / cervical mucus method

2.2 ***Basal Body Temperature (BBT)***

2.3 ***Sympto-thermal Method***

2.4 *The* Calendar Method

which may usually get affected because of motion, sickness, emotional changes, change of diet, and change of altitude. Therefore, it is considered the least reliable of them all.

Clients that are motivated to make use of NFP methods should be able to observe LOCAL and/or SYSTEMIC changes in the physiological symptoms and signs of the menstrual cycle.

LOCAL CHANGES are observed at:

- The Labia
- The Vagina
- The Cervix

The changes at these locations are indicators of the fertile and infertile phases when one wants to make use of the Billing's mucus method.

SYSTEMIC CHANGE:

This is a change in Basal Body Temperature identified through the use of a thermometer.

2.1 ***BILLINGS, OVULATION OR MUCUS METHOD***

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It is called Billings Method because the method was first studied and discovered to be an effective method of Natural Family planning by Drs. Billings (husband and wife) of Australia. They studied the changes in mucus patterns during menstrual cycle of a woman. The method involves careful daily observation and recording of the change that occur in the cervical mucus during the menstrual cycle[2,3,4,6].

MECHANISM OF ACTION

The following local changes will occur:

FERTILE PHASE:(follicular/ovulatory/proliferative phase)

At the Labia:

- Labias slide easily one over the other.
- A thin, clear, elastic and lubricant mucus will be revealed.
- If a tissue paper is applied to the labia after voiding urine, then folded and unfolded, threads of mucus stretch easily between the leaves without breaking. The mucus appears like white of raw of egg.
- Mucus observed on underclothing or on feeling the vulvas.

At the Vagina:

- The PH in the vaginal environment turns alkaline.
- Wetting from the draining of the thinned cervical mucus.
- The secretion in the vagina exhibits transparent, slippery, and stretchable consistency.
- The cervix is located hanging high up in the vagina.

At the Cervix:

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- The tip of the cervix exhibits soft like the lips consistency.
- OS will become effaced and may admit the tip of the index finger.
- Thin, slippery, stretchable mucus drains from the cervix.
- When the cervical mucus is pressed between the tips of the thumb & index finger and then separated, it forms spinnbarkeit like appearance. That is to say, clear mucus which can be stretched into a thin thread-like strand and is associated with ovulation.

Local Changes During The Infertile Phase.

At the Labia:

- No mucus on inspection of the vulva after urination.
- No mucus on underclothing or on feeling the vulva.
- The labias do not easily slide one over the other.

At the Vagina:

- Dry sensation at the entrance.
- PH of the secretion in the vagina turns acidic.
- The cervix attains low position in the vagina.

At the Cervix:

- Firm like the tip of the nose (cartilage like sstency).
- OS closed.
- OS covered with thick, sticky, and non elastic mucus.
- Cervix palpated low in the vagina.

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The observation of the mucus begins on the first day of the menstrual flow. The menstrual flow may be followed by two to four dry days. (However, some women may not experience dry days particularly those with short menstrual cycle). The cervical mucus during the fertile phase is thin, watery, slippery, and lubricant (raw egg whites of the raw egg).

Beginning of the fertile period: First day of mucus after the menstruation.

End of the fertile period: Night of the fourth day after last day of fertile mucus.

INSTRUCTION TO THE CLIENT

1. Check for cervical mucus every morning after using the toilet. i.e; with tissue paper or clean piece of clothes.

2. Carefully observe and record vertical changes daily using appropriate symbols or colors.

3. Record the last most fertile mucus of the day.

4. Abstain from intercourse during menstruation as bleeding might mask mucus discharge.

5. Abstain from intercourse on alternate dry days to minimize confusion in recognizing mucus secretion and seminal fluid.

6. Abstain from sexual intercourse on the day when mucus appear, regardless of it consistency, until the 3rd evening after the peak day. There after intercourse can b resumed to the onset of the next menstrual flow.

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2.2. *Basal Body Temperature Method (BBT)*

Basal body temperature reflects the temperature of the body at rest. There are two types of BBT curves; Monophasic, and Biphasic. The monophasic curve occurs before a woman attains the age of fertility, during the menopause and also, in infertile women from non ovulation. The biphasic curve occurs in ovulatory cycles. Therefore, the BBT in a menstrual cycle can also be used as an indicator for the diagonisis of a woman's infertility from non ovulation. The change in BBT can not be used to predict the infertile (safe) days of a woman prior to the days of ovulation. Ovulation, is detected by identifying a shift in temperature from a relatively low level during the proliferative phase of the menstrual cycle to a higher level of the temperature by 0.2 to 0.4^0c during the secretary phase. This shift of temperature is caused by the progesterone secreted from the corpus luteum following ovulation. Thus, the progesterone hormone is thermogenic[2,3,4,6].

The rise in BBT is maintained for at least 3 consecutive days after the peak day and remains hanging above the cover line until the time of the next menstruation.

Therefore, couples who want to prevent pregnancy through using the BBT method can practice sexual intercourse as soon as the third consecutive daily temperature above the level of the previous six has been recorded. This means, there is a minimum of 48 hours between the rise of temperature and commencing sexual intercourse.

EFFECTIVENESS

Least expected failure rate is 2/100 women using the method.

However, level of effectiveness depends on the level of couples motivation to practice the method.

SITES FOR TAKING TEMPERATURE

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1. Orally for 5 minutes
2. Vaginally for 3 minutes
3. Rectally for 3 minutes

INSTRUCTIONS TO THE CLIENT

1. Prepare temperature chart and thermometer
2. Take temperature before walking out of bed in the morning or after 3 hours of complete rest before getting out of bed.
3. Start taking the temperature on the first day of menstrual flow.
4. Take temperature before getting out of bed or before any activity
5. Not any deviation in normal activity E.g. if you have had sleepless night, take the temperature and indicate the disturbance.
6. Read and interpret immediately after taking the temperature and chart it.
7, Exclude temperature taken on days 1-4 and false rises if any.

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INSTRUCTION TO ACHIEVE PREGNANCY

Have intercourse from the first day of the rise of the temperature to the fourth day of temperature rise above the cover line.

MENOPAUSE TEMPERATURE CURVE

Indicates that a woman has only a monophasic BBT curve, an indication for non ovulatory menstrual cycle.

Case Study

In a series of over 1,100 cycles from healthy women, 96% of cycles showed a biphasic curve and 2% showed the monophasic curve (with no rise in the latter half). The other 2% had a curve that could not be interpreted because of illness or technical faults. It has been noted that the incidence of monophasic cycle rises with age.

The shift of temperature takes place abruptly between one day and the next in 83% of cycles, slowly over a number of days in 15% and in a step-like manner in 2%. A saw-tooth type of rise occurs rarely.

EFFECTIVENESS OF THE METHOD

The least expected failure rate is 8/100 women using the method.

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2.3 Sympto-Thermal Family Planning Methods

This is a combination of several Natural Family Planning methods used. It usually combines:-

1. Basal Body Temperature
2. Cervical mucus
3. Changes in the cervix

Other signs and symptoms that may be used are intermenstrual bleeding, intermenstrual pain/spotting. These signs can be marked on the chart. Breast tenderness may occur at ovulation or afterwards. some women do not experience any of these signs.

To use the symptom-thermal method, a woman should observe her cervical mucus and temperature changes as well as any changes in other fertility signs which may help her determine whether or not she is fertile. If a couple is using symptom-thermal method to avoid pregnancy, they will not have intercourse on:

- every other (alternate) dry days during the woman's early infertile phase, until her cervical mucus begins;
- all days of her fertile phase, beginning with her first day of mucus.

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EFFECTIVENESS

The lowest failure rate of symptom-thermal method is 6/100 woman.

CHANGE IN THE CERVIX

At the beginning of the fertile phase many women notice a rise in the level of the cervix, bit later it begins to soften and its os widens, all these changes are seen best one day prior t ovulation. After ovulation, the cervix returns to its "low" position and is often found a b

lower than before, it feels dry as there is no fertile mucus, its os closes very rapidly often in less than 24 hours and its firmness returns.

PAIN It is felt in the lower abdomen or one or other side over the area where the ovaries lie. Its duration varies from a few minutes to 12 hours, at times it lasts for a day or two. The pain may also be felt in the lower part of the back.

SLIGHT BLEEDING: This is a small intermenstrual flow or blood from the uterine lining called **"spotting".**

BREAST TENDERNESS: By tenderness is meant hypersensitivity to touch or pressurize.

WHO CAN USE NATURAL FAMILY PLANNING

Virtually all couples who want to plan their families can use NFP. However, a couples chance of using NFP successfully increases if both the man and the women are highly motivated and if they are able to communicate well with each other. NFP methods are appropriate for couples who:-

- wants to take responsibility for their own fertility
- can not or do not wish to use drugs, devices, chemicals or surgical sterilization or
- prefer natural methods for religious or personal reasons

ADVANTAGES AND DISADVANTAGES OF NATURAL FAMILY PLANNING

- No physical side effects
- Minimal cost to users
- Acceptable to those who do not accept other forms of contraception

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- May promote communication and understanding between couples
- Teaches a woman her body and gives her the ability to control her fertility with out the need to relay on drugs or devices, (etc).

DISADVANTAGES

- Requires reliable committed user
- Requires thorough training
- Users may not comply with abstinence
- Method requires diligent monitoring
- Signs and symptoms differ from woman to woman and from cycle to cycle.
- Failure rates higher than for other contraceptive methods.
- Minor user deviation from method results in higher failure rate.

Calendar Method (rhythm)

The calendar method is designed to predict the time of fertility based on previous menstrua cycles. The cycle lengths of the last 6-12 menstrual cycles are needed to calculate the fertil time. Calculation is based on the following assumptions:-

- ovulation occurs 14 days with plus or minus two days before the next menstruation
- The sperm can fertilize the egg within 72 hours (three days of it life aft ejaculation. However, it can remain alive about seven to eight days once it reach the womb.
- The egg can be fertilized within its 24 hours life after ovulation.

How to instruct the Client

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- calculate the lengths of the longest and shortest cycles over the last 6 to 12 months.
- subtract 11 from the longest cycle to identify the end of the unsafe days counting from the LMP.
- Subtract 18 from the shortest cycle to identify the beginning of unsafe days counting from the LMP.

Example:

Longest cycle	32	-	27	-	32
Shortest "	27		18		11
			9		21

This particular client should abstain from day 9 - 21. If she wants a baby, tell her to have intercourse between day 9 - 21.

EFFECTIVENESS

Least expected failure rate is 10/100 woman year.

CANDIDATE ASSESSMENT LIST

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The ideal Natural Family Planning candidate assessment of a client regarding her potential for effective use of the natural family planning method should focus on the following points.

POINTS TO CONSIDER

1. Client must have fairly regular menstrual cycle
2. Should be stable menstrual cycle, not easily affected by:-
   - STRESS
   - DIET CHANGES
   - TRAVEL
   - ILLNESS etc
3. Client should not have cervical erosion
4. Client does not have a tendency towards frequent vaginal infection
5. Client should be perceptive of her own body function
6. Client is motivated towards using this method.

ASSESSMENT TOOLS

1. **History:-**

Gynecological

- Date of last menstrual cycle
- Day of present cycle
- Variability of Cycle
- Factors contributing to cycle variability

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- History of mid cycle spotting
- Frequency of vaginal infection
- History of cervicitis or erosion
- History of cervical cryosurgery or cautery
- Present symptoms of excessive vaginal discharge, post coital spotting. vaginal itching or irritation.

2. Physical Assessment

- Inspect vaginal wall for sign of infection
- Inspect cervical mucus and assess in relation to day of present cycle
- Point out configuration of external os and color, amount and consistency of cervical mucus in relation to day of menstrual cycle
- palpate uterus, adnexa, and ovaries specifically for pathology which might interrupt her normal cycle, i.e. ovarian cyst.
- Make sure the client is able to feel her own cervix.

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3. Laboratory

- Wet smear &/or endocervical gram stain is mandatory regardless of presence or absence of symptomatology
- Perform gonorrhea culture if necessary
- Perform chlamydia culture or direct smear test if available
- Smear sample of cervical mucus on glass slide; let it air dry and check for furling pattern characteristics of fertile mucus.

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FAMILY GUIDANCE ASSOCIATION OF ETHIOPIA
TRAINING DEPARTMENT

BY ADAM ZELEKE, 1995

BARRIER METHODS

Definition: Are contraception prevent pregnancy by blocking the entrance of sperm in to the uterine cavity.

They have only a few local side effects and there are no absolute contra-indications and are available without medical prescription.

If a barrier is used, it must be used for every act of sexual intercourse. They include:

- Condom
- Diaphragms
- Cervical caps
- Spermicide creams, jellies, suppositories, foaming suppositories or tablets, aerosol foams, and
- vaginal contraceptive sponge

Indications:

- When there are medical contraindications to other reversible methods
- For infrequently intercourse
- As an interim/temporary/form of contraception
- During lactation
- Following vasectomy
- When drugs that interfere with oral contraceptives are taken
- While awaiting for another method (IUD, VSC)

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- During investigation of gynecological symptoms
- As temporary alternative or backup to another method
- In conjunction with fertility awareness

Contraindication

- Allergy or sensitivity to latex rubber
- Client's inability to obtain
- The need for highly effective protection against pregnancy

System for Control

- Proper transport & storage
- Ensure the products are used at their expiry dates
- Ensure that samples are checked every 6 - 9 months

CONDOMS

Definition

Condom is a safe and effective method of birth control sheath made to fit over the erect penis by collecting semen and acting as a barrier to the passage of sperm into the vagina.

Most condoms are made of thin latex rubber with different kinds and brands as follows:-

- Shape : plain
- Color : Transparent, opaque
- Lubrication : silicon oil, Jellies, Powders, non lubricated
- Thickness : Ultra - thin
- Texture : smooth, or ribbed surface
- With or without spermicide : nonoxynol -9 or Menfegol

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of all couples who practice any method of family planning (398 million couples), 46 million are condom users; and are more widely used among couples in developed countries than in developing countries, ie 15% in developed and only 3% of married couples in developing countries.

History

Mechanical barriers covering the penis have been used for centuries for protection against pregnancy and infection, can be traced back 1350 B.C. In 1564 A.D an Italian anatomist fallopius described protective sheaths from animal intestines. In the 18th century given the name "condom" then popularized as a means of protection from sexually transmitted diseases (STD) and pregnancy. In the 1840s began mass production of condoms from synthetic materials.

Currently condoms are produced from latex rubber with free size.

Effectiveness

Condom's effectiveness depends mainly on consistency of used. Though reliable information is not available, method failure is relatively uncommon.

- among typical users average about 12 %
- among perfect users average about 2 %
- to increase its effectiveness, use of spermicide as back up should be advocated
- joint use of spermicidal & condoms is the best approach to the prevention of STD; so women at high risk for sexually transmitted diseases should use condoms consistently during pregnancy to protect the baby as well as their partners
- 20/100 women get pregnant if used without spermicide

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Indications

- To any individual who requests it for contraception and/or protection against STDs
- To couples who have decided to use barrier contraceptives
- prevention against STDs, including HIV transmission
- Premature ejaculation

Benefits

- Condoms are relatively inexpensive
- can be used for contraception and protection from infection
- Accessible
- For women and men who do not wish to have the direct contact of th vagina with penis
- Men who have difficulty maintaining an erection
- Its lubricant can reduce mechanical friction and irritation
- Women who are allergic to their partner's sperm and /or semen.
- May minimize the likelihood of infertility or cervical cancer in hetrosexu women by minimizing the chance of STD transmission.
- Prevents messy form postcoital discharge of semen.t

Contraindications

- Men who can not maintain an erection when the condom is used
- Men or women who are allergic to rubber and spermicides

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- When either of the partners do not accept it for the purpose of birth control.
- Client's inability to obtain or use
- The need for highly effective protection against pregnancy

7. **Side Effects and Complications**

- Condom reduces sensitivity of the glans
- Requires greater care in case of thinner condoms
- The problem of allergy to latex rubber, or to the lubricant or spermicide used with the condom solution: Advice change of condom brand or type.

8. **Instructions to the Client**

- Handle the condom carefully to avoid punctures; with long finger nails
- put the condom on the erect penis before the penis is inserted into the vagina
- wait until the vagina is well lubricated, if the vagina is dry
- Roll the condom all the way to the base of the erect penis.
- leave 1 1/2 cm (1/2 inch) of empty space at the tip of the condom
- condoms can tear, so be careful
- for extra protection, use a backup method of birth control
- after intercourse, withdraw the penis immediately, holding on the rim of the condom to prevent spilling.
- If the condom breaks or tears, insert quickly spermicidal foam or gel, this reduces the risk of un intended pregnancy. You may try one to obtain postcoital pills.
- After using the condom once, throw it away, but do not leave the used condom where can be reached by children
- store in a cool, dry place

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Ask the Client at repeat the instructions you explained

Storage

- The shelf life depends on the conditions of storage
  - In a cool, dry condition 3 - 5 years
  - In hot and/or humid condition 3 - 6 months
- Storage consists of a cool room temperature, dry conditions, and convenient and accessible place away from direct sunlight
- Should be sampled at least twice a year for deterioration
- Older stocks should be distributed before more recent dates of manufacture.

Diaphragms

Definition

Is a dome-shaped rubber cup with a flexible rim. It is inserted into the vagina before intercourse. The dome covers the cervix. Spermicidal jelly applied internally & externally to the dome before insertion. It is held in place near the surface of the cervix. The contraceptive effect of the diaphragm depends partly on its function as a barrier between semen and the cervix, and partly on its function as a spermicide holder measured by fitting rings.

Diaphragms are available in arrange of 50 to 105 mm and in four styles that diffe in the inner construction of the circular rim. For parous women 70 - 105 mm. Nulliparou 50 -65 mm.

Types of diaphragms :

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- Arcing spring with a metal spring combination
- Coil spring
  /firm coiled/

- Flat spring spring is a flat band of metal

- wide seal rim : Has a flexible flange approximately 1.5 cm wide attached to the inner edge of the rim

2. **History**

Diaphragms were popularized in the early 1880s in Germany by K-Hasse. Because of it's popularty, the diaphragm has also been called the "dutch cap" or "Dutch Pessary". The most recent development in the history of the diaphragm was the introduction in 1983 of a new model that has a soft latex flange attached to the rim to create a seal with the vaginal wall.

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3. **Effectiveness**

Arching Spring

- Can be used by most women comfortablely
- Can often be retained comfortably despite a rectocele and/or a cystocele or lax vaginal muscle tone

- Bow -bend rims are some what firmer than the uniformly flexible rim style

- Many women find that the bow-bend is easier at insert.
- Available in sizes 55 to 95 mm

Coil Spring

- Comfortable for most women with allerage vaginal muscle tone and an average pubic arch notch
- Used with a plastic introducer
- Available in sizes 50 to 95mm.

Flat Spring Rim

- More comfortable than the coil or arching rims for the woman with a very firm vaginal muscle tone or a shallow notch behind the pubic bone arch, or both
- May be used with a diaphragm introducer
- Available in sizes 55 to 95 mm

wide Seal Rim

- Commonly used diaphragm
- The flange is intended to hold spermicide in place inside the diaphragm and to create a better seal between the diaphragm and the vaginal wall
- Available in sizes 60 to 95mm
- Typical use rates -14.3 - 18.6%
- Perfect users - 3%

4. **Indications**
   - For the woman who:
   - Wants contraception during sexual interaction

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- Can learn the insertion technique

- Has an acceptable amount of privacy at home for the insertion, removal, care and storage
- Has facilities , such as clean water and soap
- Is likely to have partner's approval of the method and cooperation

5. **Contra Indication**

- Allergy or sensitivity
- client's inability to obtain
- The need for highly effective protection against pregnancy
- History of toxic shock syndrome
- Repeated urinary tract infection
- Vaginal or uterine anatomical abnormalities
- Post term of 6-12 weeks delivery
- Client inability to insert remove and to take care of the diaphragms.

6. **Side Effects**

- UTI
- Local irritation caused by sensitivity or allergy
- Partner or user discomfort
- Vaginal discharge and odor may occur
- Vaginal lesion caused by diaphragm rim
- Anterior vaginal wall lesion caused by removal of the diaphragm

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7. **Instructions to the Clients**

- Timing of insertion of diaphragm
- Applying spermicide before each use
- Checking before the cervix is covered
- Leaving the diaphragm 6 hours after the last intercourse
- 5kg. wait gain or lose
- After intercourse wash with soap and warm water and dry
- Check for perforations regularly by holding up to light and pour water to sea leaks
- Avoid contact with petroleum jelly, disinfectant, detergents, or perfumed soaps and powder
- Replace diaphragm after two years of use
- No douching while the diaphragm is in place

8. **Storage**

- Shelf life 3-5 years
- Examine 6-9 months
- Keep in a cool & dry place

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SPERMICIDES:

1. **Definition**

Are chemical that inactivate and kill sperm cells and also form a barrier over the cervix. The spermicidal agents acting, are nonoxynol-9, octoxynol-9, and menfegol. Preparations consist of two components: a sperm killing chemical and a base or carrier. Both have essential roles in providing a contraceptive effect. The carrier is responsible for dispersing the chemical inside the vagina over the cervix, and holding it in place so that no sperm can escape contact with the spermicidal ingredient. For foaming products, the base also contributes a physical barrier to reduce contact between semen and the cervix.

The different kinds of carriers for the spermicide include creams, Jellies, suppositories, Foaming tablets or Aerosol foams, and Vaginal sponge.

2. **Effectiveness**

- Character of each of the various spermicide products depends on its carrier
- Neosampoon is the most commonly employed vaginal suppositories world wide. It has spermicidal agent known menfegol
- A wide range of failure rates
- Neo Sampoon remains effective for no more than 1 hour
- 20% to 30% of get pregnant if not used with others

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3. **Indications**

- As a aback-up method for clients who use condoms
- In association with diaphragm and caps
- For highly motivated women
  - Whose natural fertility is decreased
  - Possible pregnancy would not pose a high risk to health
- When there are medical contra- indication to other contraceptives
- For use during sexual intercourse
- As an interim form unitl put on other contraceptives

4. **Contra-Indication**

- Allergy or sensitivity
- Inability to obtain
- High need for protection against pregnancy

5. **Side-Effects**

- Infrequent and minor
- Local irritation caused by sensitivity
- some find hard to wait 10 - 15 minutes
- some hate its slippery character

6. **Instruction to the Client**

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- Advice the importance of using additional spermicide before each act of intercourse
- 10 - 15 minutes waiting interval after insertion for foaming tablets or suppositories
- Storage specificaters be made simple & clear. Follow guidlines instructed by the manufacture
- Correct placement, high in the vagina
- The effectiveness increases with use of a second method (backup such as condom)

Ask the client to repeat the instructions you explained

7. **Storage**

- In a cool, dry place 5 years
- Test every 6 - 9 months
- Spermicides containing mercuric compounds should never be recommended or stocked.

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VAGINAL CONTRACEPTIVE SPONGE (VSC)

1. **DEFINITION**

Is a round disposable polyurethane foam sponge, with a pillow-shaped depression at its center designed to fit over the cervix. It contains 1 gram of nonoxynol- 9 spermicide. It is removed from the vagina with the help of an attached nylon loop.

2. **Effectiveness**

- Has a low contraceptive efficacy when used alone
- Use with a condom will ensure efficacy

3. **Benefits**

- Available in one size
- doesn't require a prescription
- " need re-application for repeated intercoarse

4. **Indications**

- For woman for whom its convenience and simplicity overcome it low efficacy and high cost
- Recommended not as a first-choice method

5. **Contra-Indications**

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- Allergy for spermicide, latex rubber etc
- Inability to obtain

6. **Side Effects**

- Local irritation to the spermicide used in conjunction with the sponge
- Rare possibility of toxic shock

7. **Instruction to the Client**

- The sponge is moistened with tap water prior to use
- The sponge inserted into the vagina immediately
- Should be left at least six hours following the last act of intercourse
- Releases spermicide continuously for 24 hrs
- To prevent infection risk, should be removed with in 30 hours of insertion
- Because of relatively low effectiveness and high cost \, the VSC is not recommended by IPPFS.

CERVICAL CAPS

Definition

Is a cup-shaped device that fits over the cervix or a thimble or bell-shaped device and is held in place by suction produced by the rim of the cap. The cap acts as a barrier to semen, and spermicide placed with in the cap gives protection against any sperm which may cross the barrier.

Types of Cervical cap

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A. Cavity Rim cervical cap

B. Vimule cap

C. dumas or vaylt cap

Cavity Rim Cervical Cap

- Thimble shaped deep, soft cap
- Covers cervix only
- Available in 4 sizes with inside diameters of 22 , 25,38 and 31 mm.
- Most commonly used cap

Vimule Cap

- Bell shaped cap with flanged rim
- Covers the cx and upper vaginal vault
- made in 3 sizes 42,48 and 54 mm
- intended for use when cervical size or a symmetry doesn't allow a good fit with the cervical cap
- The sharp rim edge can cause vaginal trauma
- not recommended for routine use

Dumas or Vault Cap

- A shallow bowl shaped cap
- Resembles a small diaphragm but is made of heavier material and the rim doesn't contain a spring
- covers the cervix and upper vaginal vault
- available in five sizes from 50 - 70 mm

Effectiveness

- Not suitable for prolonged wear because a strong odor appears after 36 - 4 hrs of wear
- Misuse is an important factor for failurity

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- Under estimate the failure risk
- 17.4% is its failure rate

Indications

- Who has had difficulties or side effects with diaphragm
- Who has a cystocele, rectocele or moderate uterine prolapse
- To any woman who requests after receiving appropriate counselling and teaching an informed decision
- Woman who-doesn't have any relevant contra-indication to its use.
- Wants to be incontrol of her own method
- Wishes to separate the time of application from the actual time of intercourse
- Can learn the insertion technique
- Can have enough privacy
- Has facilities

Contra-Indication

- Hx of toxic shock syndrome
- Allergen to rubber, latex and/or spermicide
- Vaginal or cervical anatomical abnormalities
- Cervical erosion
- Acute pelvic inflammatory disease
- Cervical biopsy within the past 6-12 weeks
- Full term delivery " " 6-12 weeks
- Demonstrated inability to feel cervix
- Hx of dislodgement of cap from cervix

Side Effects

- Local irritation caused by sensitivity or allergy
- Vaginal lesion caused by vimule or vault caprim

Instructions

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- Timing of insertion. May be inserted several hours before intercourse, or just before hand
- The importance of using spermicide in the dome of the cap
- Timing of removal - do not remove until atleast 6 hours after last intercourse
- Returning for check up 1st - 1 - 2 weeks, 2nd annual check up
- Cap care: wash the cap after use with mild soap & water, rinse well, and dry before storing
  - do not apply petroleum-based product
  - the cap should be replaced in 1-2 years

Storage

- In a cool, dry condition 3-5 year
- Examine every 6 -9 months for deterioration

References

- Medical & service guidelines for FP January 1992.
- Contraceptive technology 1990 - 1992
- FP Clinic in Africa, Judith Brown
- Leaflets of different barrier methods

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Family Guidance Association of Ethiopia
Training Department

HORMONAL METHODS

Adopted from IPPF, Medical and Service Guidelines, 1992

(Befekadu Demmissie)

Introduction

Hormonal methods provide millions of users with safe and effective contraception. All hormonal methods are systemic in nature and are based on either a progestogen combined with an oestrogen or a progestogen alone.

The methods discussed in this chapter are:

- Combined oral contraceptives (COCs)
- Progestogen-only pill (POP)
- Injectables
- Implants

I. Combined Oral Contraceptives

1. Definition

combined oral contraceptives are preparations of synthetic oestrogen and progesterone which are highly effective in preventing pregnancy.

There are two types of COCs:

- Monophasic: A fixed concentration of oestrogen and progestogen hormones throughout the cycle.
- Multiphasic: Two (biphasic) or three (triphasic) variations of concentration of oestrogen and/or progestogen throughout the cycle.

COCs are available in packets of a) 21 pills, where a pill is taken for 21 days and a break from pill-taking occurs for seven days before starting a new packet, and b) 28 pills, where a hormonal pill is taken every day for 21 days and the break occurs when seven placebo pills are taken as the last pills in each packet.

NOTE: For information on brand names and composition of oral contraceptives available around the world, see IPPF's Directory of Hormonal Contraceptives.
Mechanism of action: The contraceptive effect of the COC is mainly due to

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inhibition of ovulation: They also cause thickening of the cervical mucus and endometrial changes which present an obstacle for the sperm to penetrate into the uterine cavity and move towards the fallopian tubes.

2. Indications

Combined oral contraceptives should be provided to any woman who requests them after appropriate counselling and reaching an informed decision, and who does not have any relevant contra-indication to their use.

When discussing all the contraceptive options, the COCs may be recommended especially to a woman who:

- needs a highly effective method of contraception.
- is motivated and willing to use a method which requires action daily, and will be able to obtain supplies on a continuous basis.
- may benefit from one or more of the ancillary protective health effects of COC use. This would include women who have:
  - anaemia from heavy menstrual bleeding
  - a history of ectopic pregnancy
  - painful menstrual periods
  - recurrent benign ovarian cysts
  - a history of, or are at risk of, acute pelvic inflammatory disease (PID)

3. Contra-indications

Absolute Contra-indications

Do not provide COCs to clients with:

- Past or present thrombophlebitis or thrombotic disorders
- Cerebrovascular or coronary artery disease
- Malignancy of the breast
- Malignancy of the cervix, uterus or ovaries
- Focal migraine

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TEMPORARY ABSOLUTE CONTRA-INDICATIONS

Do not provide COCs to clients with:

- Known or suspected pregnancy
  until non-pregnant

- Undiagnosed abnormal genital tract bleeding
  until diagnosis is clear, particularly to exclude malignancy

- Suspected malignancy of the breasts
  until diagnosis rules this out

- Acute liver disease such as infectious hepatitis
  until liver function tests are normal

Counsel any women with an absolute contra-indication (other than pregnancy) about alternative methods.

RELATIVE CONTRA-INDICATIONS

Relative contra-indications are the conditions which may increase the risks to the client of taking COCs.
Decisions will depend on the circumstances and clinical criteria of each case. The potential risks should be adequately explained to the client and possible alternative methods should be discussed. If COCs are chosen, it is particularly important that the woman be kept under medical supervision.

Relative Contra-indications include:

- smoking, age over 35
- hypertension or a history of hypertensive disease of pregnancy (toxaemia)
- diabetes mellitus
- history of bouts of depression
- recent history of oligomenorrhea or amenorrhoea in nulliparous women.
- gallbladder or chronic liver disease

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SPECIAL SITUATIONS

- During lactation, withhold COCs until six months after delivery or until the infant is weaned, whichever is earlier.

- When providing COCs to adolescents, caution is recommended if menstruation has not been established regularly.

- The COCs may be used with caution by any women over 40 if there are not risk factors.

- It is common medical practice to stop using COCs 2-6 weeks before a major elective surgery and to restart COCs four weeks after surgery. Advise the use of alternative effective contraception (including the progestogen-only contraceptives) during this time.

- Certain drugs reduce the efficacy of oral contraceptives. These include in particular rifampicin and several anti-convulsant drugs and hypnotics. Women should use alternative or supplementary contraception when taking these drugs.

- COCs may be used by women who otherwise have no contra-indications and who:

  - Are sickle cell disease carriers
  - Have uncomplicated varicose veins with no history of phlebitis.
  - Have a history of a non-cancerous abnormal papanicolaou (Pap) smear, if follow-up Pap (cervical) smears are performed and monitored.
  - Are HIV-positive, although the partner's use of condoms is needed to protect him against transmission of the virus.

The risks to the health of an individual women of taking the pill must be carefully considered against the risks of an unplanned pregnancy which may occur when using other, less effective, methods.

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4. COUNSELLING AND INFORMATION

All COC acceptors must receive appropriate counselling for selecting and using the method.

For selecting the method:

When discussing with clients the possibility of using the COC, include the following.

- Advantages and disadvantages of the pill, including its effectiveness, risks and benefits, side-effects, and cost, (reassure the clients about the lack of any conclusive evidence that the pill causes cancer, birth defects, or future infertility).
- Alternative family planning methods including information of effectiveness, risks and benefits, as appropriate.
- The selection of the most appropriate type of pill.
- A reminder to clients who smoke that smoking increases the risks of serious circulatory disorders, and advise all women who intend to use COCs to stop smoking.

Encourage and give an opportunity for clients to ask all their questions so that any uncertainties and misunderstandings can be cleared up.

5. THOSE WHO CAN PROVIDE ORAL CONTRACEPTIVES

Doctors, non-doctor clinic personnel, and community health workers can provide oral contraceptives, depending on local regulations and practice. Whoever normally meets the health needs of the community can be an appropriate person to distribute the pill, when the pill is provided in the community, through non-clinical services, this is termed Community Based Distribution (CBD) or Community Based Family Planning Services (CBS).

When COCs are provided through CBS, the community or field worker must be given appropriate training, b) follow clear guidelines, and c) have adequate supervision and back-up referral facilities. The training should include the use of appropriate checklists to guide the worker in screening for contra-indications and identifying the signs of complications of COCs.

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Social marketing, by which contraceptives are provided over the counter through subsidized commercial channels, is another method of pill provision. Social marketing programs should ensure adequate client information and education about the method and what to do if there are signs of complications.

6. HEALTH ASSESSMENT

- The purpose of the health assessment is to determine the client's suitability for oral contraceptives.

COMMUNITY BASED FAMILY PLANNING SERVICES

The CBS health assessment consists of the identification of conditions which require a referral for a more complete clinical assessment. (See for a model protocol for providing oral contraceptives through CBS, which contains samples of checklists and referral cards).

Workers in clinical facilities which provide oral contraceptives should be prepared to offer a health assessment to clients who are referred from the non-clinical CBS system. (Clinics should also act as back-up resources to COC social marketing systems).

CLINICAL SERVICES

The health assessment performed at the clinic should include medical history, physical, pelvic examination and any necessary laboratory examinations.

- Medical History:

  At the clinic a medical history should be obtained with special attention to potential contra-indications and special situations.

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Service Provider's Observations Look for the abnormalities listed	No Yes	Service Provider's instructions: If the responses fall in the "YES" column, fo instructions below.
1. Is blood; pressure greater than 140/90? or diastolic BP greater than 110?		1. if BP is greater than 140/90 on three succes DO NOT give COCs, help client make inform of a non-hormonal method.
2. Is pulse greater than 100 or highly irregular?		Questions 2-4: If answer "yes" to any one of these questions have serious heart disease. Refer to a phy client make informed choice of non-hormo
3. Is pallor or cyanosis observed?		
4. Is extreme shortness of breath observed?		
5. Is she jaundiced?		Questions 5-6: If "yes" to either one of these, may sign o disease. Refer to physician. help client m choice of a non-hormonal method.
6. Does she have enlarged or tender liver?		
7. Does she have severe, tender varicose veins or a painful, swollen knot in leg?		7. May indicate high risk of blood cl physician. Help client make informed hormonal method.
8. Are her legs extremely swollen with fluid?		8. May indicate heart disease. Help client choice of non-hormonal method.
9. Does she have suspicious lumps in her breast? Lumps that begin breast cysts of fibroadenomas are usually smooth, clearly defined in shape, often occur at the same place in both breasts, and are freely moveable. These lumps may also swell slightly each month just before menses.		9. Lumps that are suspicious for canc non- tender, unilateral, irregular in shap mobility. Refer to a physician for evaluation. informed choice of a non-hormo If lump is not suspicious, give c

CCRDA

Pelvic Exam Checklist for Users of Combined Oral Contraceptives (COCs)

Service Provider's Observations: Look for the abnormalities listed	No Yes	Service Provider's Instructions: If the responses fall in the "YES" column, follow the instructions below
1. Does she have: a) an enlarged smooth, soft uterus?		1. a) Pregnancy is likely Refer to prenatal clinic. DO NOT give COCs. b) May have ovarian cyst, ectopic pregnancy or tumor of ovaries or tubes. Refer to physician. Advise client to use condoms and/or spermicides for protection against STDS, including AIDs.
2. Does she have: a) marked tendermass of cervix, adnexa, or uterus? b) abnormal cervical discharge? c) genital ulcers?		Questions 2 a-c. : Any one of these findings may indicate sexually transmitted disease; treat according to procedures in STDs. Give COCs. Also advise client to use condoms and/or spermicides for protection against STDs, including AIDs.

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- It should include age, relevant family and past medical history gynecological history including LMP current medication. See check list on physical and pelvic examination page 7 and 8.

- Physical examination:

The initial physical examination at the clinic should include: Weight, blood pressure, examination of extremities for varicosities or signs of phlebitis, check of skin and eyes for jaundice, breast examination (with instructions for self-examination), bimanual pelvic examination and inspection of the cervix other examinations as indicated by medical history.

- Laboratory tests

When possible, include the following:

. urine for glucose and protein

. pap (cervical) smear

. others as indicated by medical history and/or physical examination

COCs should not be withheld due to an absence of part or all of the physical or laboratory examinations if no contra-indications are found to exist in the medical history. The required examination(s) should be scheduled within the following three months.

The medical history and the results of the examinations must be documented in the clinical record of each client, specially the presence or absence of an possible contra indication and/o special situation.

7. CHOICE OF PILL

COCs containing the lowest effective and acceptable dose of oestrogen an progestogen should be used for all clients. See page 10 Oral Contraceptiv Formulas.

. Start with a combined monophasic preparation which contains 30-35 m of oestrogen.

. Change the dose or type of pill only if there are side effects significa enough to cause the client to consider discontinuing or changing pills.

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8. INSTRUCTIONS TO WOMEN FOR USING THE PILL

Use a sample pill packet to explain its use. If the client will use a 28-day packet, explain to her about the ..... pills representing the week when the "period" will occur. Provide the instructions clearly and in a language appropriate to the background of the client.

a) Starting the pill:

The client should start the first cycle of pills within the first five days of her menstrual period, preferably the first day. Some women find it convenient to start the pill on a particular day of the week (e.g. Sunday); if a woman wishes to do so and that day is beyond the fifth day of her menstrual cycle, advise her to use additional protection against pregnancy for the next seven days.

For the post-partum clients:

- If not breast feeding, she should start the pill at 3-4 weeks post-partum. If the client wishes to start after the first four weeks post-partum and she has not yet seen the first post-partum menses, the possibility of pregnancy should be ruled out before starting the COC.

- If breast feeding and she wishes to use the pill recommend the progestogen-only pill. The combined COC should be withheld until six months post-partum or until the infant is waned, whichever is earlier.

b) Taking the pill:

The client should take one pill every day at the same time until the packet is finished; advise the client that she should not interrupt taking the pills before a packet is finished, even if she does not have sexual intercourse.

Starting a new packet:

. If the client is using the 28-pill packet, she should start a new packet the day after she finishes the previous packet (without a break).

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- If the client using the 21-pill packet, she should skip seven days before starting a new packet.

If the pills are taken correctly, the client will always start a new packet on the same day of the week.

c) Missed pills:

Advise the client that if she misses one or more pill, she may have some spotting or breakthrough bleeding, but more importantly, that she will be at a greater risk of becoming pregnant. Give the client the following instructions:

- If one pill is missed, the client is should take the next pill at the usual time this could mean that she will take two pills on the same day or at the same time.

- If two pills in the first two weeks are missed, the client should take two pills on two consecutive days and then continue with the rest of the packet as usual.

- If two pills are missed in the third week, or if three or more pills are missed at the time, the client should discard the packet and start a new one immediately.

In all cases, the client should use another contraceptive method (barrie or abstinence) for a minimum of one week to secure additional protection

Whenever possible, ensure that the supply given to the woman will allo her to have a standby packet of pills always available. It might be goo practice to provide the woman with a supply of condoms when she given her initial packets of pills in case she needs to use them f additional protection.

d) The following side effects are common during the first three cycles, a then usually disappear. They should not be a reason to discontinue t method:

- breakthrough bleeding
- nausea, dizziness
- breast tenderness
- headaches (mild)

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e) Vomiting and diarrhoea:

Acute vomiting and/or diarrhoea interfere with the effectiveness of the pill. In these cases, the use of additional contraceptive protection for at least seven days may be required.

f) Tell the client that a few medicines reduce COC effectiveness, and for this reason she must always share all information on her medication with all health and family planning care providers.

g) Advise the woman to consult a clinic if pregnancy is suspected or if she experiences any of the following warning signs of complications:

- severe abdominal pain
- severe chest pain, cough, shortness of breath
- severe headache
- eye problems; loss of vision or blurring
- severe leg pain in calf or thigh
- jaundice (yellowness of the eyes and skin)

To avoid anxiety in the client, explain to her that complications are very rare and that the chances of pregnancy are very low if she takes the pills correctly and consistently. You can mention that her health will be better protected by using this highly reliable method of contraception than allowing an unwanted pregnancy to occur.

h) If a client may be at a high risk of infection with the virus that caused AIDS (the HIV virus), advise use of condoms in addition to the pill.

i) Give the client the date of the next visit and the name of the pill she has been given. If he client is being seen at a clinic make sure that she knows the clinic name, address and telephone number of the nearest clinical facility where she can consult in case of problems.

NOTE: The above information, and a list of warning signs, can be put on a card or leaflet and given to the client.

Encourage the client to ask questions to clarify and uncertainties and request her to repeat the basic instructions to check for understanding.

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9. FOLLOW-UP CARE

The client should be seen either at a clinic or by a CBS worker about three months after starting the pill and then at least every year.

THREE-MONTH FOLLOW-UP PROTOCOL

- Update the client's address and how to contact her
- Assess the client's satisfaction with the method
- Determine if the client has had any problems or side effects and, if so, record them in the clinical record or check-list
- If any serious problem or side effect is detected in non-clinical services (CBS), refer the client to a clinical back-up facility
- At the clinical facility, update the medical history, perform blood pressure and weight measurements and any other examinations as indicated by the history.
- Provide appropriate counselling as required
- Review with the client the pill danger signs and the instructions for taking the pill, then resupply and give instructions for annual follow-up.
- Encourage the client to contact the CBS worker or the clinic any time if she has any questions, complaints or problems.

ANNUAL FOLLOW-UP PROTOCOL

- Follow the three months protocol with an updated medial history and a assessment of satisfaction with the method.
- In addition, if in a clinical facility, perform a physical assessment to include:

  - blood pressure
  - breast examination (with self-breast-examination instruction)
  - a pelvic examination, with a pap smear if this is due and if possible
  - laboratory test when possible: Urine for glucose and protein, others indicated.

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Duration of use: In women who are otherwise well, oral contraceptive use may be continued or many years. There is no need for periodic discontinuation of pill use.

10. SIDE EFFECTS

Common side effects of COC use: Nausea, vomiting, dizziness, breast tenderness, weight gain, fluid retention, intermenstrual spotting, breakthrough bleeding and depression.

Missed periods may also be a side effect, which necessitate ruling out pregnancy, (see for statement on diagnosis of pregnancy especially if pills have been missed or taken late. If missed periods continue, in the absence of pregnancy, another pill may be tried.

For suggestions on management of common side effects and problems, see page 16. If management does not help, or if the problem is of serious concern to the client consider discontinuing the pill and give advice on alternative methods.

The following conditions usually required discontinuation of COCs, advice on alternative methods, and provide treatment or referral as necessary:

- galactorrhoea
- Jaundice
- gallbladder disease
- new or worsening migraine
- new or worsening hypertension

11. MANAGEMENT OF ORAL CONTRACEPTIVE SERVICES

See page 16-20

CCRDA

Oral Contraceptives - Management of Side Effects and Health Problems

PROBLEMS	ASSESSMENT	MANAGEMENT
Amenorrhea (absence of bleeding or spotting)	Ask how she has been taking her pills. Has she missed any pills in the cycle?	Missed pills or pills t late increase risk of pregnancy. Clients on packets may forget to l a pill-free week for me
	Rule out pregnancy by symptoms, physical exam and a pregnancy test, if available	If the client is pregna stop pills and provide adequate and relevant counselling (see sectio of Chapter 2 of Guidelines)
	Is she using a low-estrogen pill (35 micrograms or less of estrogen)?	If the client is taking correctly, reassure her Explain absent menses d lack of build up of ute lining. If the clie unsatisfied, try a estrogen pill, if avai
	Has she already been on 50 mcg estrogen for at least 3 months?	If the client is taking correctly, reassure he Amenorrhea may still be insufficient ho stimulation of the li the uterus. If the cl unsatisfied, switch to estrogen pill with s progestin. If this not available, char another method or conti same pill until clie change to another meth

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Adapted from: JHPIEGO Family Planning Service
Guidelines Oral Contraceptives
DRAFT: September 11, 1991

...LEMS	ASSESSMENT	MANAGEMENT
...t Fullness ...nderness ...ally ...ves within ...e months of ...ting the	Determine whether the woman is pregnant by history and pelvic exam	If pregnant, discontinue pill and provide adequate and relevant counselling
	Determine whether the woman has breast lumps or nipple discharge suspicious for cancer	If physical exam shows lump or discharge suspicious for cancer, help client make and informed choice of another method; refer to specialist. Do a pap smear of the breast discharge, if available.
	If she is breastfeeding and breast are tender, examine for breast infection	If breasts are not infected, recommended appropriate clothing for support. If breast infection present, use warm compresses, advise to continue breastfeeding and give antibiotics as appropriate.
	Ask whether client notices this only at a certain time of the month.	Decrease estrogen in pill or, if already on lowest estrogen, decrease progestin. If the lowest dose pill is unacceptable, help client make an informed choice of a progestin-only or other method.
...ssion	Ask about other possible causes, e.g. family, financial or social problems.	Counsel as appropriate.
	If no other cause is found, ask client if depression has worsened on combined OCs.	If depression has worsened on OC, help client make informed choice of a non-hormonal method. If OC has not caused depression to worsen, the pills can be continued

...from: JHPIEGO Family Planning Service
...es Oral Contraceptives
... September 11, 1991

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PROBLEM	ASSESSMENT	MANAGEMENT
Headaches	Are headaches severe or frequent, or associated with nausea?	If not severe or frequent associated with nausea, reassure
	Has she had loss of speech, numbness, weakness or tingling, or visual changes associate with the headaches?	Refer to a specialist if "Yes" answer is associate with any of these or abo symptoms. Discontinue p help client make informe choice of a non-hormonal method.
	Has she ever had high blood pressure (BP)?	Regardless of history, c the BP. If evaluated, s HIGH BLOOD PRESSURE, bel
	Ask client if the headaches have become worse since she began the pill	If worse on combined OCs switch to progestin-only pills or non-hormonal contraceptive method if other contra-indications no worse or better, expl cause of headaches. Co OCs can be continued unl high blood pressure or neurologic symptoms or s develop, or headaches w on combined OCs.
	Determine whether the has nasal drip or tenderness in area of sinuses	Refer for treatment of sinusitis. Continue pi aware that some antibio cause deceased effectiv of pill, so recommended of a backup method whil antibiotics. See page Interactions with OC's.

Adapted from: JHPIEGO Family Planning Service
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PROBLEM	ASSESSMENT	MANAGEMENT
Blood pressure	Ask if this is the first time anyone has told her that she has high blood pressure. Allow 15 minutes rest then repeat blood pressure (BP) reading	Continue combined OCs unless this visit shows systolic BP is greater than 160 mm Hg. or diastolic BP is greater than 110 mm Hg.
	Recheck (BP) on two more visits, each one week apart	If combined OCs are discontinued, help client make an informed choice of a non-hormonal method. Tell her that high BP due to combined OCs usually goes away within 1 to 3 months after discontinuing the pill. Take BP every month for three months, to be sure it returns to normal. I not, refer for medical care.
	Find out if pills are taken in morning or on an empt stomach.	Take with evening meal.
	Exclude pregnancy	If pregnant, discontinue pill
	Rule out other causes of nausea (gall bladder disease, hepatitis).	Evaluate for disease (gall bladder disease, hepatitis, gastro-enteritis)
	None of the above	Switch to a lower estrogen pill or a progestin-only method

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PROBLEM	ASSESSMENT	MANAGEMENT
Spotting or Bleeding between periods. (Common during the first three months after starting the pill)	Has client recently begun OCs?	Reassure, spotting and bleeding decrease markedly most women
	Ask if she has missed one or more pills, or if she takes pills at a different time every day	If yes, instruct, if no, swi to a higher estrogen pill above 50 mcg estrogen) for several cycles until spott resolves. Return to lower dose ill. If spotting returns, continue with 50 pill
	Exclude gynecological problems, e.g., tumors, pregnancy, abortion, pelvic inflammatory disease (PID)	If gynecological problems present, provide, or refer for, medical care
	Is client taking long-term medicine (e.g., rifampin)?	Client may require a high combined OC (50 mcg estrog pill)
	Ask if she had a normal pap smear within the last year.	If possible, do a pap smea more than a year has passe since the last one. Wipe cervix clean before takin smear

Adapted from: JHPIEGO Family Planning Service Guidelines Oral ContraceptivesDRAFT: Se
11, 1991.

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FAMILY PLANNING AND VOLUNTARY SURGICAL CONTRACEPTION (FP/VSC)

Dr. Taye Tokon

INTRODUCTION

Family planning is an important venue for the preparation of motherhood. The practice of family planning has always had a bearing in promoting the life-span of children because it helps in strengthening the primary care activities.

According to U.N. reports, about 50,000 infants and children die every day throughout the world. Similarly, 500,000 maternal deaths occur yearly as a result of childbirth and related conditions.

On the other hand, it has been established that the use of contraceptive methods (Family Planning) can contribute to saving the children and mothers. But the services are not available, or accessible or people are not aware of them, in areas where they are needed the most.

This shows that greater efforts have to be made by countries, governments and in particular by health workers in expanding family planning programs and services.

COUNTRY SITUATION

With an infant mortality of 139/1000, child mortality of 247/1000 and maternal mortality of 20/1000 Ethiopia is one of the least developed countries in the world. Yet, it is the second most populus nation in Africa (55 million in 1995).

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The health service coverage is 35% and the contraceptive prevalence rate (C.P.R) is 2 - 5%. With this low coverage and high population growth, the need for adequate health care, and in particular, family planning is highly essential. But, despite the population policy, the uncompromising pregnancy and abortion laws, the social, cultural and traditional taboos have hindered the rapid expansion of F.P in the country.

However, the Family Guidance Association of Ethiopia has introduced F.P to Ethiopia in 1966 (G.C) and continues to train different categories of health manpower (government and non-government) and updates their knowledge in F/P/ methods periodically.

This not is aimed at strengthening these same efforts and in introducing the permanent methods of F.P (V.S.C) available to health workers with the hope that they will in turn make these services available and accessible to all.

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METHODS OF BIRTH CONTROL

Methods of contraception could be broadly divided into two types based on the duration of effectiveness of the control mechanism:-

Temporary: where control is over a short period by using condoms, diaphragms, caps, chemicals (injectables) pills and IUDs

Permanent: where control is achieved by surgical intervention by permanently occluding the fallopian tubes (in females) or vas deferens (in males).

VOLUNTARY SURGICAL CONTRACEPTION (VSC)

V.S.C has become one of the most widely used methods of F.P since the last 20 years. It is the most effective, simple, one-time-procedure available for both males and females. The risk of complications and death is minimal when standards of procedure are adhered to. In females it is indicated for those clients:-

a) of high parity (3 and above children) and who wish to have no more children

b) those that consent of their own free will to have the procedure

c) have history of obstetric complications or several c/s

d) can not use other FP methods (health problems)

ETHIOPIAN EXPERIENCE IN V.S.C

V.S.C. was introduced to Ethiopia in the late 1980s. In 1989 FGAE started VSC project in collaboration with Association of Voluntary Surgical Contraception (AVSC). Seven VSC teams (doctors + nurses) were trained at Nairobi, Kenya through FGAE sponsorship. Five teams were trained at FGAE in 1990 and two teams were later trained in Nairobi, Kenya in 1991 bringing the total to 14 teams.

Presently, VSC services are rendered at all major referral hospitals and regional hospitals through out the country through the sponsorship of FGAE and seconded by AVSC. Additional VSC services and training of VSC teams will continue at FGAE to ensure VSC expansion in Ethiopia.

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COUNSELLING IN VSC

As the name indicates VSC should be voluntary. The permanent nature of the procedures, the small risk of failure and the steps of the procedure should be made clear to clients.

Information on all forms of contraceptive methods available should be presented to the client to reach a final decision. The consent and final decision reached should be based on good information, education and counselling. Clients should always feel that they can reverse their decision any time before the procedure without fear. The informed consent should be signed by the client and the attending doctor.

SCREENING, ASSESSMENT AND DOCUMENTATION FOR V.S.C

PREOPERATIVE

- L.M.P. (female),pregnancy test (when in doubt)
- Psychological evaluation including status of marital relationship
- Medical history, past surgery etc
- Complete physical examination (including pelvic
- Laboratory examination R/O diabetes, bleeding
- Prescribe temporary method
- Shaving/clipping, bathing, personal hygiene
- Medications

POST OPERATIVE INSTRUCTIONS

- Wound site should be kept clean and dry
- Return for any complications immediately

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- Return for stitch removal
- Check up visit (beyond post operative period)
- Rest for few days (recommended)
- Use condoms or other contraceptives for 20 ejaculations in (male vasectomy)

DOCUMENTATION

- Individual clinical card
- Individual procedure forms (with consent signed)
- Reporting formats/statistics

TYPES OF SURGICAL CONTRACEPTION

Minilaparatomy under local anaesthesia (ML/LA) was developed in 1970s. It is the current approach to female sterilization. The operation is simple and the incision very minute. Based on the time interval after child birth and timing of procedure, VSC could be categorized into two types:

a) Post Partum

b) Interval (elective)

POST PARTUM SURGICAL CONTRACEPTION

Performed 24 - 48 hrs. after delivery. The immediate postpartum period within 24 hrs. is usually the most commonly used & complication are minimal.

PROCEDURE:

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After delivery the uterus and tubes are high in the abdomen.

- No lithotomy position, no uterine elevator used

- Prepare skin as for surgery
- Incision 1.5 - 3 cm (half circle) on the lower aspect of umbilicus after local anesthesia with 1% lignocaine (lidocaine (total 20 cc)
- Tubes delivered by tubal hook tied and cut (pomeroy technique)
- Peritoneum and abdominal wall closed in layers
- Operation site is dressed

INTERVAL SURGICAL CONTRACEPTION

Also referred to as "elective VSC" It is done at the clients convenience any time later than the post partum period.

PROCEDURE:

- Empty the bladder (make sure it is empty)
- No lithotomy position needed
- Make final p/v, introduce uterine elevator
- Prepare op.site (as for standard surgery)
- Infiltrate skin with 1% lignocaine (lidocaine (total 20 cc)
- Incision 1.5 - 3 cm (upper suprapubic hairline)
- Identify tubes (by fimbriae) deliver by hooks
- Tie and cut (pomeroy technique) and replace
- Close peritoneum and abdominal wall (in layers)

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- Dress with sterile gauze
- Remove uterine elevator

NOTE: Tissues should NEVER be handled by hand.

Aseptic technique and gentle manipulation should always be used.

COMPLICATIONS Are rare if standard procedures are observed. Major complications are less then 1%.

MINOR:
- bleeding from incision site
- infection of wound

MAJOR:
- pelvic infection
- bleeding from torn mesosalpinx
- uterine perforation
- bladder injury
- bowel injury

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VASECTOMY

Surgical sterilization for men is one of the safest, simplest and most effective method. But it is highly neglected. A careful and accurate counselling is essential. In addition every client should clearly understand (including the wife) that vasectomy is not castration and that sexual potency is not compromised.

PROCEDURE:

- prepare skin, infiltrate with 1% lignocaine/Lido.
- locate and anchor the vas deferens
- make an incision of 2.5 cm on the scrotum
- tie and cut each vas deferens
  (coagulation or clips could be used)
- dress operation site

NOTE: currently " No-Scalpel technique" is used for vasectomy with special instruments. No incision is necessary.

COMPLICATIONS:

- bleeding from op-site
- hematoma and swelling of scrotum
- wound infection
- spontaneous recanalization can occur (late)

METHOD FAILURE

Pregnancy after sterilization occurs for various reasons, primarily because:

- the woman is already pregnant at the time of operation
- surgical error is made usually confusing the tubes
  (in female) vas deferens (in males) with other structures
- equipment failure

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- ends of fallopian tubes reconnect
- fisultas develop (allowing sperm and ovum to meet)
- spontaneous recanalization of the vas deferens

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Lecture note on Family Planning Counselling.

By Gebeyehu Mekonnen.FGAE.

What is counseling?

Counseling should not be confused with fortune telling, or other things beyond human imagination.

Counseling then as we define it, is:

a therapeutic and growth process through which individuals are helped to define goals make decisions, and solve problems related to personal, social educational and career concerns. Specialized counseling provides assistance with concerns related to physical rehabilitation, employment, mental health, substance abuse, marital and family problems, human sexuality, relegious and value choice, career development and other concerns.(warner, 1980)

Historical development:

The profession of counseling, began by Frank Person in the 1990s, exprienced tremendous growth in the 1960s a modest but profound change in direction during the 1970s, and has entered the 1980s, striving to retain what has been of value while being responsive to new needs.

Where can counseling be useful?

In schools
In Hospitals
In Rehabilitation centers. etc..

What is Family Planning Counseling?

Family Planning counseling is a face to face communication in which clients are helped to make informed and voluntary decision and act upon those decision.

Objectives of contraceptive counseling.

Contraceptive counseling should be given in the context of reproductive health counseling. This includes counseling for the achievement of pregnancy, for sexual health and for the prevention of STDs. As well as contraceptive purpose.

Contraceptive counseling has the objective of helping individuals or couples to:

. Decide whether or not they need and want to use a method of contraception.

. Make an informed free choice of contraceptive method.

. Learn about their method of choice.

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. Use their method of choice properly.

. Overcome anxieties and make adequate decisions if problems occur.

Why is family planning unique when compared with other services?

1. The service deals with sensitive feelings of human beings: That is to say when one deals or discusses issues related to family planning, sexuality issues are raised which in this society are not openly raised and discussed rationally due to cultural sanctions..
2. The service is exposed to misconceptions and roumers: All sorts of roumers are attached to the use of different methods which scares women to stop using methods or discourage them not to ask for the methods.
3. Family planning clients do not want to be considered as patients: If a woman comes seeking the service and considered as a patient who is unable to talk and walk properly with out some ones help she may not be motivated to visit the center again. Because of the mentioned reasons and others family planning counseling is important both for the benefit of individual woman and for the promotion of planned parenthood.

Basic steps in counseling.

Counseling has three basic steps.

1. The introduction stage.

The counsellor should begin the session by trying to put the client at ease. Introduce himself and explain his reason for wanting to see her or him.

2. The examining and exploring stage

The counsellor should gather information In order to learn about the client and his/her needs. Refer to the client's file and obtain about the client.

3. The decision making stage.

The counsellor at this stage Helps the client to arrive at an informed decision after providing him/her all the necessary information.

These steps can easily by more understood by the letter of the word **GATHER**

The points to be remembered are as follows:

Greet the client.

.As soon as you meet each client, give them your full attention and respect. Remember every one wants his or her pride

.Be polite, greet them ,introduce your and offer them seats

. Ask how you can help.

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Tell your client that you will not tell others what they say

In clinics explain what will happen during the visit. Describe physical examination and laboratory test if any.

. conduct counseling when no one can see.

Ask clients about themselves.

- Help clients talk about their needs, wants and any doubts, concerns, or questions they have about family planning.

- If the client is new, prepare his/her history by using a standard checklist or form, to write down the client's,

  (1) Name, age
  (2) Marital status
  (3) Number of pregnancies
  (4) Number of births
  (5) Number of living children
  (6) Family planning in use now and in the past
  (7) Basic medical information

- Explain that you are asking for this information to help him/her choose the best family planning method. Keep questions simple and brief. Look at your clients as you speak.

- Many people do not know the names of diseases or medical conditions. Ask clients about each part of the body, from the head to the feet. This will help them remember and tell you about conditions.

- If clients are not new, ask them if anything has changed since the last visit.

All clients need to know about the available family planning methods. How much they need to know deeper about the methods that interest them and that they already know.

- Tell your new clients which methods are available and where.

- Ask your clients which methods interest them.

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Ask your clients what they know about the methods that interest them. (You may learn whether a client has wrong information. If it is important, gently correct the mistake).

•Briefly describe each method that the client wants to know. Explain:

(1) how it works
(2) its advantages and benefits
(3) its disadvantages and possible side effects

Help Clients Choose a Method

Help each client match family plans, needs, and preferences with a family planning method. Listening and questioning are important here.

Ask clients if there is a method they would like to use. Some will know what they want. Others will need help in thinking about their choices.

•To help clients choose, ask them about their plans and their family situations. If the client is uncertain about the future, start with the present: What is the client's family situation now?

•Ask clients what her/his sexual partner wants. What method would he or she like to use?

•Ask clients if there is anything they do not understand. Repeat information when necessary.

•Some methods may not be safe for some clients. When a method is not safe, tell this to the client and explain clearly why the method may not be safe. Then help the client choose another method.

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•Check whether the client has made a clear decision. Specifically, ask the client "what method have you decided to use?"

Explain How to Use a Method

After the client has chosen a method:

•Give her or him supplies, if appropriate.

•If the method cannot be given immediately, tell the client how, when and where it will be provided.

•For some methods, such as voluntary sterilization, the client may have to sign a consent form. The form says that the client wants the method, has been given information about it, and understands the information. Help the client understand the consent form.

•Explain how to use the method.

•Ask the client to repeat the instructions. Listen carefully to make sure she or he remembers and understands.

•Describe any possible side effects and warning signs. Tell the client clearly what to do if they occur.

•Ask the client to repeat this information.

•If possible, give the client printed material on the method to take home.

•Tell the client when to come back for a follow-up visit.

•Tell the client to come back sooner if she or he so wishes or if side effects or warning signs occur.

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Return for Follow-up

At the follow up visit:

- Ask the client if she or he is still using the method.
- If yes, ask the client if she or he has any problems with the method.
- Ask the client is having any side effects, mentioning them one at a time.
- If so, find out how severe they are. Reassure clients with minor side effects that they are not dangerous. Suggest what they can do to relive them. If the side effects are severe, refer the clients for treatment.
- Ask how the client is using the method. Check to see if it is being used correctly.
- Ask if the client has any question.

If a client wants to try another method:

Tell the client about other methods again and help her/him to choose another one. Remember - changing methods is not bad, it is normal. No one really can decide on a method without trying it. If a person's situation changes, then another method may be better.

If a client want to have a child, help her to discontinue her method. Refer her to have her method removed, if necessary. Prenatal care is important. Tell your client where to go for prenatal care when she becomes pregnant.

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Elements of High-Quality Family Planning Counseling Services

In order to render high quality FP/Counseling service the following seven elements should be given serious considerations.

1. In FP/Counseling Service:

- The client's needs should be put first
-

•The goal of FP/Counseling should be for clients to make informed, voluntary and well considered decisions

•Responsibilities of the various staff members involved in counseling are clearly delineated

•Counselors and counseling supervisors should be well trained

•Counseling is conducted in comfortable settings that protect the client's privacy and confidentiality

•Counselors should have adequate support materials. They must be trained to use them properly

•Records must be simple and easy to keep, yet provide the program complete information it needs

•Counselors are regularly suprvised. The prpose of supervisers is to imrpove counselling, rather than criticize staff members.

•Counsellors should 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 material

•To gague whether the system is working properly, the program conducts periodic evaluation on counselling (for instance, to assess client knowledge and satisfaction)

2. *Characteristics of Family Planning Counsellors*

The following are the expected characterisitcs of counsellors for quality FP/Counselling service:

•Personal qualities and attitudes

•A desire to work with people

•A belief in the value of fmaily planning

•Respect for the right and ability of people to make their own decisions

•Comfort with issues related to human sexuality and the expression of feelings self awareness (awarenss of one's own values, biases, expectations, capabilities, and limitations)

•Unbiased attitudes toward various population groups

•Tolreance for values that differ from one's own

•Empathy for clients

·A supportive attitude toward clients

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- Ability to maintain confidentiality
- Unbiased attitudes toward various family planning methods. Furthemore, the counsellor should always try to
- Create an atmosphere that is comfortable for the client
- Present information clearly
- Encourage equestions
- Listen and observe attentively
- Ask questions effectively to encourage the client to share information and feelings.
- Guide the counsellor - client interaction
- Speak the client's language

3. *Knowledge Related to Contraception*

The following are the minimum knowledge expected about contraception

- Reproductive anatomy and physiology
- Rationale for family planning, including voluntary sterililzation (health risks, personal reasons, economic reasons, population pressures)
- Contraceptive technology (the benefits, risks, effectiveness, and mode of action for all available family planning methods, including voluntary serilization)
- Common myths, rumours, and misconceptions about family planning methods, including voluntary sterilization, and how to counteract them (details of sterilization surgery, including anaesthesia)
- What clients need to do before and after sterilziation is performed, and when Intrauterine Contraceptive Device (IUD), or Norplant is inserted
- What clients should do if they experience complications or side effectes related to contraception.
- How to prevent the spread of sexually transmitted diseases, including AIDS

4. *Knowledge About Family Planning Counselling*

The counsellor is expected to respect the purpose and principle of counselling.

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- Purpose of counselling, i.e., to help clients make informed, voluntary well-considered decisions about fertility
- Importance of confidentiality
- Differences between counselling information, promotion, and informed consent
- Major responsiblities of the family planning counsellor
- Special counselling needs of clients considering voluntary sterilziation

5. *Knowledge and Abilities Related to the Programme*

The counsellor should be conscious about the:

- The policies and administrative procedures of the institution
- Client eligiblity requirements
- Referral networkds and procedures
- Record-keeping requirements
- Ability to cooperate with other staff members and agencies

6. *Knowledge Related to the Country*

The counsellor must perform his duty in accordiance with government laws and policies regarding family planning, including voluntary sterilization.

7. *Knowledge related to the Clients*

To know his clients better the counsellor should consider:

- The traditions, norms, taboos and values in the clients locality
- How clients make family planning decisions and who influences those decisions
- Why clients change their minds or become dissatisfied with contraceptive ethods.
- Factors that prevent clients from aksing questions, participating in discussion or expressing their needs, interests and concern

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·Fertility norms and common sexual practices

•Reasons why clients request for family planning, including voluntary sterilization

•Signs that indicate the client may not be making a well-considered decision

•Factors that may inhibit successful contraceptive use

•Special cases and circumstances of the clients and how to handle them.

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TRAINING DEPARTMENT OF THE FAMILY GUIDANCE ASSOCIATION OF ETHIOPIA

COMMUNICATION IN FAMILY PLANNING

BY:- TILAYE TESFAYE

PART ONE

I. What is Communication?

Definition

Communication is the transmission of ideas, knowledge, skills, emotion etc. in order to establish "Commonness" or " Common areas of understanding" among one or more persons.

It is therefore, a process of transferring an idea from a SOURCE TO RECEIVER with intention of changing the behaviour of the RECEIVER. And the behaviour change is realized through the Exchange of information and Participation of the receiver.

II. Purpose of Communication

1. To create awareness and knowledge about a particular idea eg. EPI, FP , modern agricultural technology etc.

2. To change individuals' attitudes towards the particular ideas so that people are more favourably disposed. That, people are motivated to do something.

3. To convince people to adopt a particular idea. eg. balanced diet in order to be healthy or bring up healthy children, family planning in order to have pregnancy or to use fertilizers and pesticides to have better yield etc.

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Therefore the scope of the communication process to transfer ideas in order to have desired effects in human behaviour change.

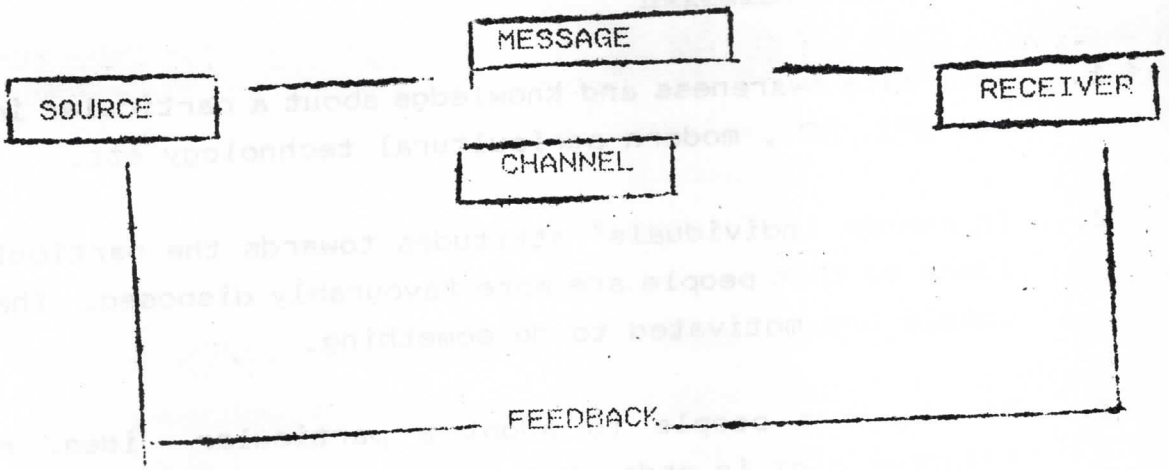
III. Who Do You Communicate With?

Communication takes place between

- Wife and husband
- Doctor/health officer/nurse/health assistant and patient
- Teacher and student
- Shopkeeper and purchaser
- Family planning provider and FP client
- Speaker and listener etc.

But how many of them understand each other? How many of them bring about behaviour change as a result of communication?

IV. Communication Model or Elements in Communication Process (SMCR)



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1. Source : The originator of the message being communicated.
   - Individual
   - Team/Group
   - Institution/Organization
   - Books, Journals, Magazines etc.

2. Message : The idea that the source transmits to the receiver. It tells the message receiver how to do or how to respond positively.

   : The Means of transmitting messages.

   - Inter-personal i.e face to face communication
   - Seminars, workshops, conferences, class room teaching-learning process, role play etc.
   - Mass Media Channel
     - Print Media: Books, newspaper, magazines, charts etc.
     - Electronic Media: Radio, T.V, Video etc.
     - Signs and symbols eg. body language etc.

The most important difference among the above mentioned channels of communication is that in inter personal communication feedback is facilitated.

Receiver (Audience, Client

... individuals to whom the message is addressed. The receiver is the most important element in the communication process.

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V. Effects of Communication

Communication effects are the changes that take place in the RECEIVER'S behaviour as a result of the message transmitted by the SOURCE.

There are three types of communication effects.

i Changes in the receiver's knowledge

ii. Changes in the receiver's attitudes i.e changes in the individual's belief about an object or an idea etc.

iii. Change in the receiver's overt behaviour eg. use of contraceptives, purchase of certain products, utilizing modern agricultural technologies.etc.

VI. Factors Influencing Communication

A. Factors Related to Source/Sender

1. Communication Skills

- Ability to speak
- " " write
- " " listen
- " " analyze
- " " understand the norms of the community
- " " develop and utilize communication support materials/teaching aids.

2. Structure/Organization of Message Content

- Presentation style
- Easily flowing ideas
- Sequence of ideas
- Relationship among ideas
- Conclusion and summary

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3. Knowledge About the Audience

- General background characteristics of audience
- Knowledge
- Age
- Sex
- Marital status

4. Personality

- Confident
- Trustworthy

5. Culture- Influences the way we

- Produce message
- Interpret message

B. Factors Related to Message

1. Selection and Organization of Content

- Main points of the message must not be omitted
- Avoid using technical terms/jargons
- Avoid confusing and contradicting message

2. Appropriate, Meaningful and Applicable Messages

- Type of intervention introduced should take into account the cultural value, socio-economic conditions of the audience etc.

3. Timely and Self Explanatory

4. Understandable and Clear

C. Factors Related to Channel

1. Sensitizing the five sense of organs

- Public speech
- Radio
- T.V films
- News letters etc.

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2. Acceptability
3. Familiarity
4. Availability
5. Understandability

D. Factors Related to Receiver

1. Previous knowledge about the subject
2. Ability to listen effectively
3. Visual ability and others mentioned under the source.

VIII. Teaching Aids in Communication Process

Teaching aids/support materials are important tools in communication.

1. Visual Aids – Posters flip charts, slides, film strips
2. Audio Aids – Radio, tape records
3. Audio visual aids – motion films, videos etc.
4. Signs & symbols
5. Role play

Remember!! We can learn 11 percent through hearing, we can learn 83 percent through seeing

VIII. Barriers to Communication

- Age
- Socio-economic conditions
- Language vocabulary words body language/gesture
- Attitudes sender's or receivers'
- Competition for attention
- Time

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IX. Overcoming Barrier to Communication

A. The sender must know his audience

- Background
- Interest
- Language

B. The message must be

- Timely
- Meaningful
- Applicable to the situation

C. The Audience

- The non listener
- The know it all
- The impatient type
- The negative personality
- The silent and unresponsive
- The indecisive personalities

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PART TWO

I. Family Planning Communication

Family Planning (FP) communication means sharing information and ideas about FP with a community. In order to communicate successfully we need information about the community. There are three types of questions to ask about a community.

1. The first type is numerical
   - How many people are there?
   - How many men and how many women?
   - How many young and how many old people?
   - What is the birthrate?
   - What is the mortality rate, particularly among infants and children?

II. The second type of question concerns the way the community thinks about life
   - What are their attitudes to such crucial matters as birth, death, religion, marriage, health and the role of women?

III. The third type of question about the community is related to:
   - Political
   - Social
   - Economic structures and these include questions about the changes taking place within the community and the effect of political and economic changes taking place out side.

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As can be noted, FP communication follows the same patterns of communication process. But its very nature makes it distinct that:-

a) *FP deals with the beliefs that are central to individuals. One reason for centrality of FP* beliefs is that:

They are perceived as also dealing with sexual intercourse. Rain Water (1960) says "Most contraceptives introduce new complexities and annoyances to the sexual relationships."

b) These beliefs are extremely private, personal and taboo. Thus FP ideas are not very interpersonally discussable or communicable. Some empirical evidences about the issue at hand might describe *the situation as follows:*

i. A study (Fayyaz 1971) in West Pakistan showed that 97 percent females and 69 percent husbands covered by the study reported never discussing FP.

ii. In Malaysia (1971) out of 8,000 sampled women, 50 percent reported that people were shy to talk about FP at all.

iii. For lack of spouses (husband or wife) communication the husband who underwent vasectomy did not know that his wife was fitted an IUD (Intra-uterine Device)

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c) It deals with socio cultural values.
Having many children is considered Asset rather than Liability that:

- Children are old age security
- " " source of labour
- " " symbol of prestige etc.

d) FP and fertility regulation involve a lot of people in deciding the number of children a woman should have.

e) FP and fertility regulation are considered the responsibility of women alone.

f) Rumors revolve around FP/contraceptive methods.

g) Virility of the husband is questionable if stopped having babies.

h) Knowledge of FP males have is low.

i) Requires a concerted effort to sustain FP acceptors for a long period of time etc.

Therefore, FP communication intends:

i. To create knowledge of the ideas of FP, of specific FP methods/contraceptives, and/or small family norm.

ii. To change individuals attitudes towards these ideas so they are more favourable.

iii. To secure the adoption of FP methods so as to present births.

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II. Sequences in Communicating FP Information and Education

The provision of information, education and communication (IEC) long considered a key component of FP programs has two major programmatic objectives.

i. to inform people of the existence of FP methods/contraceptives and services

ii. to educate FP acceptors on the proper use of methods to insure correct and continued contraceptives. Therefore, in order to bring about behaviour change toward practicing FP the following sequence should be maintained.

a) Talk about FP history and concept that
   - FP is an old as man himself
   - Various types of traditional methods had been used ever since a long ago
   - Traditional FP methods are being used by many cultures to date

b) Discuss the health benefits of FP
   - Child health
   - Mother health
   - Family health

c) Talk about the advantages of small family norm

d) Provide contraceptives/FP methods

e) Back up FP services with counselling.

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It should be remembered that without large segments of the population becoming aware of a new idea and understanding it fully, no change agent can operate effectively. Without credible, believable change agent, the best information presented will never be fully used. Therefore, inorder to secure credibility and trust from the community the change agent should be close to it. Closeness depends on two main factors. Firstly, it is the quality of the communicator as human being, his personality, his ability to identify with the community, and above all his sensitivity in human relations.

Secondly, it is a matter of certain level of cognitive knowledge of local customs and beliefs, but also of group dynamics, perception psychology and related fields.

III. Sustanability of FP Client on a Method

To start practicing FP is not the last resort in FP programs. Acceptance and continued use of contraceptive are the most important aspects. Therefore, to make a client keep on using a method, special attention should be given to quality FP services.

Quality of FP Services

- Communication between service provider and client
  - adequate information on advantages and disadvantages of each FP method with simple language.
  - possible side effects of each method, listening to personal problems of individual clients.

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- Clients should be treated with respect, feel welcome and there should be confidentiality.

- Availability of broad mix of FP methods enhances the choice of an appropriate method e.g. sterilization would not be appropriate for those who want no more children.

- FP service providers should be trained and retained.

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Summary

Promotion of FP programmes through effective communication requires Two way communication. To achieve the desired FP results, the following important points should be considered.

The Source/Sender

- Must set an objective for his message
- Must prepare his message in sequence
- Should know about the audience knowledge & attitude toward the message
- Must know the needs and interest of the audience and general back ground.
- Must clear out all the possible communication barriers.

The Message

- Must be up to date
- Must be meaningful to the clients/FP beneficiaries
- Must be sequentially organized
- Must be relevant and appropriate to the local situation and culture and socio economic of the beneficiaries
- Must be clear, short and to the point
- Must reflect traditionally, culturally accepted norms and values.

The Channel

- Must be appropriate, available and affordable
- Must be audible
- Must be visible
- Clear and readable
- Must correspond to the specific topic

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The Receiver

- Must be free from doubt about the message
- Must be free from doubt about the message sender or communicator
- Must be voluntary to overcome the existing communication barriers

So that Two Way Communication can be Established

TIP!!!

Effective Communication Does Not Try To Change An Audience's Mind. It Tries To Build On What The Audience Already Thinks, Wants And To Design. The Appeal Around The Existing Motivation.

CCRDA

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Daily Integrated MCH/FP Service

I. Introduction

Daily integrated service means that basic treatments, vaccination, Antenatal Care family planning, Nutrition monitoring and Health Education are available on any a Mother and Child visit the clinic, Men, Women and Children may come on any day for whatever service they need. The health staff should first deal with what they have come about and then offer other service and advice, e.g. vaccinations contraception, etc.

Health clinics will continue to charge for treatments given to adults and older children, and as before continue to give free (to children under 5 years) the following treatments with donated MCH drugs: vaccination, Family Planning and Antenatal Services.

Having all MCH services available every day is much more convenient for the mother. She need only come once to the clinic for all the things she needs. In the old system she may have come on one day for treatments (poly clinic) and another for vaccinations and another day for Family Planning. You might think that it would be more work to do a daily integrated service. But it is more efficient because you can give all the services needed at the same visit. Also your work is spread evenly thought the week. The health worker gets a lot of satisfaction by knowing he is giving a better service any by achieving high levels of coverage, eg. for vaccination, in his area.

II. How to start daily Integrated MCH

You may need extra equipment, vaccines, needles and syringes and Family Planning pills: if so order these from your Health Center which will then order from the Regional Health Department. But start integration, as best you can, with the things you have.

Health Center and Hospitals will need to provide integrated clinic rooms and also a referral clinic room staffed by the Doctor or experienced nurse. Most ill people with common illnesses will be treated in the integrated clinic rooms by the nurse or Health Assistant. They refer only the difficult cases to the Doctor or experienced nurse.

Health axillaries can do the registered and may be thought to weigh (and correctly mark on the growth charts) all children under 5 years attending. They may also direct people from the waiting room to the rooms where nurses or health assistants are doing their integrated clinics, making sure the next per is ready to enter the clinic room when the nurse or health assistant has finished seeing the last person.

III. Guide to Reorganization at Health Center/Clinic Level

Organizational changes needed at Health Center/Clinic: Responsibility of Awraja manager, Health center chief or clinic chief.

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1. To make more efficient use of the available rooms it is necessary to reorganize the use of the rooms and make three examination rooms available in a health centre (and 2 rooms in health stations). Each of these rooms will give a full integrated service.

2. Staff are given a changed schedule of duties so that there is always a nurse or health assistant to work in each examination room during working hours.

3. Provide training for all health staff on the details of how to do the integrated approach.

4. Make one or two people responsible for registration work eg: search worker or health assistant. make sure that they promptly start registering in the morning, registering one persons at time and directing them to wait outside the examination rooms.

5. Organize patient flow the avoid unnecessary waiting time thorough the :

   - Registration,
   - Weighing of children,
   - Examination room.

6. Order extra supplies of vaccines, F.P. pills, cards, etc. in time for when integration starts. At the end of the Awraja courses the participants should be able to take extra supplies of F.P pills and cards back with them, ready to start a daily service the following week.

7. The Awraja manager or person in charge of the health center should arrange a regular supervision schedule and notify the clinic chief of when to expect the visits.

Who can do the integrated MCH service? any Doctor, Nurse or Health Assistant.

What equipment is needed? - a smile, a kind voice, two chairs and a table.

On the table you need:

Child Health Card

- Growth monitoring - vaccination cards
- Family Planning and antenatal card
- A small supply of commonly used drugs
- Family Planning pills and condoms
- A bowl for vaccines, containing ice cubes and' a little water
- Medical equipment such as a blood pressure syphgmomanometer
- MCH tally sheet and treatment registers

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All these things can fit on the table in from of you where you sit to talk to your patients. Try to give privacy by seeing person (or family) at a time with the other waiting people another room. If there are two Health Assistants and tow suitable rooms (as well as the waiting room) then both health assistants can do integrated clinics at the same time.

IV. Details of Health Activities and Personal Health Education in the Integrated Clinic

Greet the mother kindly and try to compliment her about something (for example, for bringing all her cards). Ask her why she has come.

1. If she or her child is ill ask the questions and examine the child to find what is wrong. If treatment will held then give the medicine and explain how it should be taken and for how many days. But do not give medicines unless you really think it will help, because unnecessary medication cause problems (side effect and in any case it is wasteful use drugs that aren't needed. If you don't give medicines explain why and give other advice. If the mother needs a TT injection, explain what it is and give it to her - then at least she feels she has got something from her visit to the clinic and is also protected from features.

2. If she has come for another reason, such as vaccination or Family Planning do remember to ask her questions and shows you care, anyway she may wish to discuss something else in addition. Then deal with the thing she has come for.

3. Tetanus Vaccination for women:-

   Ask her is she has had the tetanus vaccinations. If not explain that it will protect her and her newborn babies against tetanus. Is she agrees give her the vaccination. It is now national policy to vaccinate all women (whether pregnant or not) who are of fertile age (15-49) years). She needs two doses, at least one month apart during pregnancy and then booster doses, after 6 months then again after a year and again after another year.

4. Weighing Children and Nutrition Advice

   Weigh each child who is under 5 years. Record the weight on the growth monitoring card and check the shape of the curve to see if he/she is gaining weight. For those that are under weight or not growing properly, try to find out why and ask the mother to come every month for weighing. Encourage the mother to continue breast feeding for as long as she can (2 or more years) and after 4 months of age to give porridge as well as breast milk. To the porridge she should add other food, for example, milk, eggs, oil, butter, lentils, beans, vegetables and fruit. Children need to be fed frequently (five times a day or more), especially if they are sick. Explain simple rule of food hygiene and encourage mothers to follow them.

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5. Antenatal advice for pregnant women

Ask her if she is pregnant. If she is, ask questions about her previous pregnancies and also about this one (for details look at the antenatal card). You should ask her to come each month from when she first knows she is pregnant. If she has had significant problems in last pregnancy of this pregnancy refer her to the health centre or hospital. **Problems in her last pregnancy** long or difficult labour, cearean operation, still birth bleeding. **Problems in this pregnancy** eg: short height (less than 1.5 meter), bleeding, abdominal pain, high blood pressure debilitating illness, twins or breech. If one examining her you think she is anaemic, give her Iron and folic acid tablets one each day throughout the pregnancy. Advise her to eat more food than usual during pregnancy and eat a good variety of foods, eg: cereals, milk, eggs, chickpeas, peas, beans, vegetables, fruit, butter and oils (depending on what is available).

6. Family Planning:

Ask her if she wants to know more about Family Planning. If she does, tell her simply and clearly about the Family Planning Pill. Condoms and any other Family Planning methods (such as IUD loop) that are available in your areas. If she wants the pill ask her the questions and examine her (see Family Guidance Association Guidelines) and if she is eligible give her the pills and cell her to start taking them on the first day of her next period.

7. Wholewheat Education

Don't forget to explain everything you do. Explain simply and clearly why it is necessary and what you are giving. Ask her if she has any questions. Remind her to bring her cards and her children's cards with her every time she comes to the clinic. If she sees that you always ask for the card she will remember always to bring them. Tell her to keep the cards and bring them even when she or her children are fully vaccinated, so that the health worker knows that they are completed.

V. A summary of the Integrated MCH Service

Men, Women and children, whether sick or well, can come to the hospital clinic at the same time on any day. They are offered any of the services they need: basic treatments, vaccination, antenatal care, Family Planning, Nutrition monitoring and health education.

- Greet each persons kindly
- Compliment a mother on something
- Ask her how she and her child are
- If ill, find out what is wrong but only give medicine if you really think they will help

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- Check every child's weight and record on the growth chart. Give advice on nutrition, encouraging mothers to use the foods available locally.
- Check vaccination record - give any needed
- Pregnant women: ask about problems in this and previous pregnancies and give nutrition advice
- Ask if parents want Family Planning information
- Explain everything you do, ask if the patient wants to ask any questions.
- Remind mothers to bring their cards every time they the clinic
- Tell patients when to come back eg: for further vaccination

Registration and Recording

1. **The integrated Attendance Register** replaces the AN, FP, well baby and sick baby registers.

2. **The Integrated Register** is for **new** attenders, recording the registration number under which all new attenders are registered. This is done once only and not on subsequent visits. The main purpose of the register is that if she mother forgets to bring the MCH card the register can be used to find the number under which the clinic cards are filed. Also it provides information on the number of men, women and children under 5 registered.

3. Record in the integrated Attendance register the father and mothers name but not the children name. Record the number of children under 5 years.

4. All cards to be kept at the clinic are to be filed **together** under the new number as a **"Family Folder",** including; the women's card, child card (individual vaccination card), and the clinical card (if available) or men women and children in the family.

5. Women's health card replaces the family planning (F.P.) and maternity cards, Tetanus vaccination is also recorded on this card; as well as on the (take home) MCH card.

6. **Mother and Child Card** replaces the ; child growth chart, vaccination card (small one), AN and FP appointment cards. Child vaccinations and women's tetanus is recorded on the front page. Also FP, antenatal and vaccination appointments can be recorded on the back page.

7. Children's vaccinations and a copy of the growth chart should be recorded on the individual (large yellow EPI) card. This is kept at the clinic as a " **Child Card"** if there are no large vaccination cards available then use the small one instead.

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8. A small identification (ID) card should be given with the new "Family Folder" number recorded, to be taken home and brought at each clinic visit so that the clinic cards can be easily retrieved. The ID card would be used by men, women over 49 years and children over 5 years. But for women 15-49 years and children under 5 the MCH card acts as an ID card.

9. All cards are to be extracted at registration and all cards are taken with the patient into the consultation room.

10. The previously separate daily EPI and MCH tally sheet is replaced by the **MCH tally sheet.** Every person given vaccination, FP, AN, or Growth Monitoring, should be recorded on the **tally sheet.** At the end of the month add up the figures from the tally sheets from each consultation room and each outreach, and complete the EPI and MCH monthly report forms.

11. This system provides all the data required for the existing **monthly reporting.**

12. At Wholewheat Station there will be a **treatment book.** In Health centers a treatment (morbidity). sheet is use distad. Record only those given treatments (medicines). Including those coming for treatment of illness, antenatal cases needing treatment or children under 5 needing treatment. From this you can get the statistics on the number of illnesses treated.

VI. Work description for the integrated clinic worker

1. **Make ready a room for requistration** you need on the table:

I. The **integrated requester** to record the following details at the first visit.

- The number (the new common registration number)
- The date
- The name of the man, women, or both it married
- The age
- The address
- The number of children that the women has under 5 years

II. Mother and Child Wholewheat Cards

III. Women's cards (F.P., A.N., Tetanus)

IV. Child cards (individual " card)

V. Identify cards (ID) for other family members.

VI. Clinical cards (or plain paper) for each man, women or child; to recor diagnosis and treatments.

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Take care that different cars are available in enough number: remember to request them in time to the wholewheat Center. Make sure you order enough cards in advance. If you run out of cards use the plain paper until new cards come.

2. make ready the other rooms in order to perform the **daily integrated programme.** You need on the table.

- A small supply of commonly used drugs eg: Iron, aspirin, antibiotics etc.
- Pills, condoms
- ORS packets
- A bowl for vaccines, containing ice cubes and a little water
- Syringes and needless, enough for one needle and syringes for each vaccination. Use your new steam sterilizer.
- Forceps to pick-up needles and syringes
- Medical equipment such as a blood pressure machine, otoscope, thermometer etc.
- The tally sheet for records
- Treatment book or sheet

If you work alone in the Wholewheat Station then it is better to do the registration and clinic work in the same room. Put two table together: one of registration procedures, the other of the daily integrated activities for each person without loss of time. **Register and then treat/give MCH** for each person in turn (do not delay people by registering every one first).

3. **Registration and giving cards**

a. Record personal data in the register

b. Fill in the mother and Child Wholewheat cards with name and address. Fill in the card even if the women does not have children with her. In such a way the card can be used for her tetanus vaccination and appointments and will be ready when the women brings the child on the next visit. If there is no old card fill out a new one. Give an **identify card (ID)**, this is to be brought to the clinic when other members of the family came to the clinic. From the number on the ID card the "family folder" can be located.

c. Fill in the name address on the individual vaccination card

d. Always give any women attending a "women's card" only fill in the name and address, do not discuss F.P. etc. until she is alone in the examination room.

e. Give to the woman all the cards and direct her to wait outside the examination

f. Men attending are also given the family of cards to take to the examination rom. If there is no family folder or cards yet for his family, he is given a clinical card and ID card.

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4. **In the examination room**

a. Fill in, during examination, all the cards that the women has:

- the mother and Child Wholewheat Card;- with the child's weight, and vaccinations and the next appointment for the next appointment for the mother and child.
- the "women's card".
- the child (individual)
- the clinical card (or plain paper) with any treatments given

b. At the end of the visit:

- Give to the mother the Mother and Child Card and identify card and put them into a plastic bag. She should bring it every time she visits the clinic. Keep in the clinic the women's card" child card", the (individual card) and clinical cards, pinned together or in a folder together.

Fill in the tally sheet according to performed activities. The end of the month you will use this to compile your monthly report and to monitor coverage using the graphs.

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WHY SUPERVISION?

The purpose of supervision is to promote continuing improvement in the performance of health workers.

It will address the four major factors on which performance essentially depends:

- the adoption of appropriate objectives
- surmounting the difficulties encountered
- the stimulation of staff improvement
- the development of staff motivation

1. Making sure that the objectives are appropriate supervision is one of the appropriate ways

   1.1 to make sure that the objectives correspond to the needs
   1.2 to restate, discuss, explain, justify and obtain endorsement for the objectives of the programme
   1.3 to make sure there are no divergences between the objectives of the staff involved and the objectives of the users
   1.4 to seek solutions to any conflicts that may exist between the various parties regarding the programme objectives

2. Making sure that the staff adjust to the difficulties encountered.

   Supervision is then the appropriate way:-

   2.1 To observe how the tasks entursted to different categories of workers are carried out, and under what condition
   2.2 To analyses the positive factors and the obstacles to performance (knowledge ad attitude of workers, environment, resource needed etc)
   2.3 To identify jointly the causes of these difficulties,

   - Job descriptions
   - Distribution of tasks
   - Schedule and time table of work

3. **Helping to Develop Staff Motivation**

   Programme objectives, however good they may be, do not generate good results of their own accord. These objectives need to be perceived, accepted and understood by workers eager to achieve them. Supervision is an appropriate way:-

   3.1 To get a clear picture of the motivation of health workers in respect of their fundamental needs (the need to belong, the need for respect and the need for the sense of achievement)

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3.2 To help them to develop the necessary maturity to assume responsibility, in particular by identifying and discussing the work-related factors that enhance or discharge motivation

3.3 To identify shortcomings in their skills in communication, problem solving and the resolution of conflicts

3.4 To adapt the style of leadership given supervisors to the expectations of the staff, taking into account the nature of their work, their maturity and their socio-cultural environment.

4. Helping Staff to Improve Their Performance and Competence

Supervision differs form conventional inspections (to police) in that the supervisor gives support to the workers being supervised. Support should be given wherever the need is felt, whether it be in the understanding of objectives, in the performance of tasks or in human relations.

Supervision is and appropriate way:-

4.1 TO identify the need for information on :-

- the community being served
- the wholewheat problems
- the goals, methods and structures of the programme, the standards to be attained

4.2 To identify the skills needed for:

- patient care
- management
- information, communication, education, training problem solving

4.3 To decide jointly on the learning methods by which workers can remedy these deficiencies: reading, private study, case studies, discussion groups

4.4 To set up a continuing education programme which will meet the workers needs for improvement of their skills.

4.5 To identify the workers basic needs

- need for security
- social needs
- need for respect
- need for achievement

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4.6 To select and plan the methods of management or training that are appropriate:

- consultation
- incentives
- changes in the style of leadership etc.

4.7 To identify any particular needs for logistic or financial support

4.8 To discuss and pass on suggestions for remedial action to the management

Supervision, therefore, concentrates on people and sets out to improve performance. It is mainly justified by the fact that it gives the supervisor and opportunity not only to provide guidance and to advise, help, teach, and to motivate workers in the field with a view to enhancing performance and there by improving the delivery of services, but also to learn.

What activities does supervision involve?

Stage I Activities involved in preparation for supervision

1. Study of documents

- objectives, targets, standard norms, evaluation results
- previous supervision results, progress reports

2. Identification of priorities for supervision

- which programme activities out of the numerous aspects
- In which area, institution or units
- Which category of workers must receive priority attention?

Review - Plan

- objectives, targets
- quality and quantify of work
- resources available
- rate of coverage/achievement
- rate morbidity and mortality observe
- the organization of work in the unit
- the skills of the worker involved
- the attitude of the users

3. preparation of a supervision schedule

- checklist according the institutions
- availability of the workers involved in the programme
- the time needed

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- dates and times of staff meetings
- if a need arises the dates of village committee meetings
- frequency of the visit - (2 X a - year, minimum)

Stage II - Activities involved

1. Establishment of contacts

   - individual contacts in the work place
   - contacts with village committees
   - contacts with the full health team

2. The supervisor review the objectives, targets and established norms with the worker, (according to the checklist)

3. The supervisor observes the worker carrying out his or her tasks

   - the skill (technical, managerial)
   - the attitude (towards users, colleagues)
   - the organization of resources (at work place, of equipment)
   - the utilization of resources (time, supplies)

4. The supervisor identifies gaps and needs for follow up

   - Ask workers to suggest what changes can be made to help improve performance
   - Training needs
   - Needs for logistic support, supplies or others

5. The supervisor consults community representatives

   - Is village committee familiar with the objectives and targets of PHC
   - Level of community participation.
   - Assess the level of consumer satisfaction by discussing with members.

6. The supervisor reports to the health team

   - the supervisor will discuss in the general meeting of the staff by going over the check-list of priority concern.
   - Summarize comments and reach resolution by consensus
   - The supervisor will be providing the health team with very valuable information through this kind of feed-back, and in doing so, will boost their motivation and help to improve their performance.

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Stage III. Activities involved in follow-up of supervision

Follow-up responsibility is mainly by the health team based on the supervisor's report.

1. The supervisor and the health team clarify the objectives and targets of the programmes.

2. The supervisor and the health team jointly attempt to organize a programme of training activities (if needed).

- review each worker's needs for training identify the method of learning best suited to each subject
- this may be, reading, demonstration, workshop, seminars, discussion groups etc.
- preparation of teaching materials, the provision of teaching, financial support.

3. The supervisor and the health team jointly reorganize the timetable as needed.

- comments on the inadequacy or inappropriate nature of logistic support. (equipment, supplies, transport).
- draw up list of requests.
- identify the items that might have the greatest impact.

4. The supervisor makes a report

- a two-way flow of information, from workers to supervisors and from supervisors to workers.
- must be communicated to the various levels concerned.
- the supervision report will include :-

a) the purpose of the visit, the working hypothesis and activities for priority supervision.

b) the needs identified and the measures to be taken

c) the necessary support measures

d) the scheduled date of the next supervisory visit.

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Supervision Activities in Three Stages

Stages	Objectives	Activities
Stage One	Preparation for Supervision	1. Study the available documents 2. Identification of activities 3. Preparation of supervision schedule
Stage Two	Supervision Activities	1. Establishment of contacts 2. Review of objectives, targets and norms 3. Observation of the workers as they carry out their tasks 4. Identification of gaps and any follow-up and support needs 5. Consultation with the community representatives 6. Reporting to the health team
Stage Three	Flow-up of Supervision	1. Clarification of objectives and targets 2. Joint organization of a training programme if needed 3. Reorganization of the time-table as needed 4. Making changes in logistic support if needed. 5. Preparation and circulation of a report supervision.

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How to Supervise

If supervision is the art of guiding, instructing and encouraging staff initiative, it must be seen to be of value and the worker supervised must regard it as a support and a way of improving competence.

What style of supervision should be adopted ?

Various methods of supervision are described in the literature :-

- the direct methods that imply contact, interaction between supervisor and supervise.
- the indirect methods based more on the analysis of documentation and on administrative type action.

To simplify, there are three main style of supervision :-

1. Autocratic supervisor is the one who says "Do what I tell you".

   Tries to see everything
   Know everything
   understand everything
   be every where and often confuses
   authority with domination

   - This style often results on a drop in efficacy and efficiency when supervisor in away. Results in fear, reluctance, lack of confidence, or feeling of insecurity.

1. May be considered temporarily and cautiously :-

   For coordination and consistency particularly in the case of a programme employing a large number of staff.

2. For tasks requiring immediate action, such as an emergency (epidemic, disaster)

3. With staff who have limited skills or experience.

4. With staff who are known to be unreliable.

Generally succeeds only when the subordinate can be closely supervised, which is often not possible in rural health work.

2. Anarchic - corresponds to the moto "do as you like" The supervisor has confidence in his employees and in extreme cases lets them do as they like, with foreseeable consequences such as lack of coordination of activities, neglect of important tasks, duplication and loose of interest in the work.

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3. The democratic supervisor will say "let us agree on what we are going to do".

Democrat - type of supervision is particularly suitable.

- for work requiring creativity, such as research
- for highly competent and experienced people
- for people who are known to be reliable
- for people who are willing to accept responsibility and take decisions

Indeed, to the three simplified supervision styles already mentioned it is generally necessary to add a forth more realistic style : a cocktail made up by mixing the first three in difficult proportions as required, but giving preference to the democratic style when ever possible.

Trying to develop the supervisee's personality.

It involves a change, a continuous progression from a state of immaturity to a staff of maturity.

These states of immaturity and maturity may be defined as follows :-

Immaturity	**Maturity**
- passive	- active
- dependent	- self-reliant
- little variation in behavior	- variety of behavior
- limited interest,	- many interests, deep commitment
- subordinating, need supervised	- long term vision and objectives
- poor perception of himself/herself of dominance	- position of to be equality - self-confidence and self-control

Trying to increase the motivation of the supervises motivation is bound up with the process of personality development.

- it may be defined as an internal impulse that drives the individual to effort and to action, motivation affects attitude.
- that it is directed towards satisfying basic needs (whether physiological or psychological).

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These needs can be ranked as follows.

Primary needs	Secondary needs
- Needs for accomplishment, achievement, fulfillment	- power - responsibilities - success - competence
- Needs for Esteem	- recognition - respect, feeling of usefulness, promotion status
- Social Needs	- belonging to a group - communication - participation
- Needs for security	- shelter - clothing - job - environment
- Physiological needs	- food - rest - sex

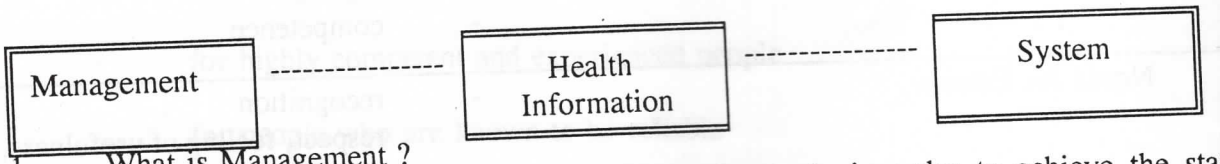
The supervisor must be a leader

- The supervisor needs to be a good manager who knows how to plan, organize and see to the implementing of activities in addition to management of staff.
- The supervisor must also be selected on the bases of personal qualities.
- Supervision is an undertaking that implies country in which people learn and improve every day, but must always be based on knowledge, experience, enthusiasm and integrity, all of which are essential attributes for leaders and supervisors.

CCRDA

Management Information System
Or
Health Management Information System

What is HMIS ?



1. What is Management ?
   - Getting things done efficiently through people in order to achieve the stated objective(s).
   - Consists of activities carried out by managers
   - They plan, organize and control the major activities of services and initiate activities.

2. What is Health Information
   - Aggregate of facts or data organized into knowledge or intelligence useful for decision making.
   - Also power to make correct decision.

3. What is System ?
   - A set of two or more elements which are joined together to attain a common objective.
   - The output of the concerned health organization by connecting the operating of subsystems through the medium of health information exchange.

In general What is HMIS?

- a system designed to provide selected decision oriented information needed by management to plan, monitor and evaluation the activities.
- a system designed to collect, analyze and produce selected health information useful for decision making.

The Purpose of HMIS

a. to identify health problems; set priorities
b. to plan; monitor and evaluate health service;
c. to identify resources useful for undertaking PHC activities; monitor performance.
d. to make other decision related to health services.
e. Promote supportive supervision.
f. understand training needs.
g. controlling epidemic/mobilizing Community
h. submitting periodic technical and managerial reports.

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What is HMIS ?

Management	----------	Health Information	----------	System

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   - Also power to make correct decision.

3. What is System ?

   - A set of two or more elements which are joined together to attain a common objective.
   - The output of the concerned health organization by connecting the operating of subsystems through the medium of health information exchange.

In general What is HMIS?

- a system designed to provide selected decision oriented information needed by management to plan, monitor and evaluation the activities.
- a system designed to collect, analyze and produce selected health information useful for decision making.

The Purpose of HMIS

a. to identify health problems; set priorities
b. to plan; monitor and evaluate health service;
c. to identify resources useful for undertaking PHC activities; monitor performance.
d. to make other decision related to health services.
e. Promote supportive supervision.
f. understand training needs.
g. controlling epidemic/mobilizing Community
h. submitting periodic technical and managerial reports.

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HMIS is a useful knowledge for decision making

- Reduces uncertainties
- Rational decisions could be made
- Across and not an end by itself
- The process of data collection, analysis, presentation and utilization.

Mechanism of Collecting the Data (Source of Data)

- Census of households and population.
- Routine registration of vital events.
- Recording and reporting of Health Activities
- Surveys
- Data on Resources - 3Ms..... Etc.

2. Indicators to be used what to measure as a change

2.1. The health status of the population

- Fertility
- Morbidity
- Morbidity ..... etc.

2.2. Performance Indicators

- Level of activities performed
- Follow up results (Default)
- Population coverage

2.3. Quality of Services

- Acceptance Rate
- Sustainablity
- Health Status

2.4. Efficient Use of Resources

- Manpower
- Money
- Material

2.5. Others

- Communities Involvement
- Intersectoriality .... etc..

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3. Type of Data Required

3.1. Health Status Data

- Morbidity
- Mortality
- Fertility

3.2. Data on activities performed

- Preventive
- Promotive
- Curative ..... etc..

3.3. Data on Resources

- Facilities/Infrasturcture
- Manpower
- Fund ..... etc. Budget, Equipment

3.4. Data on population

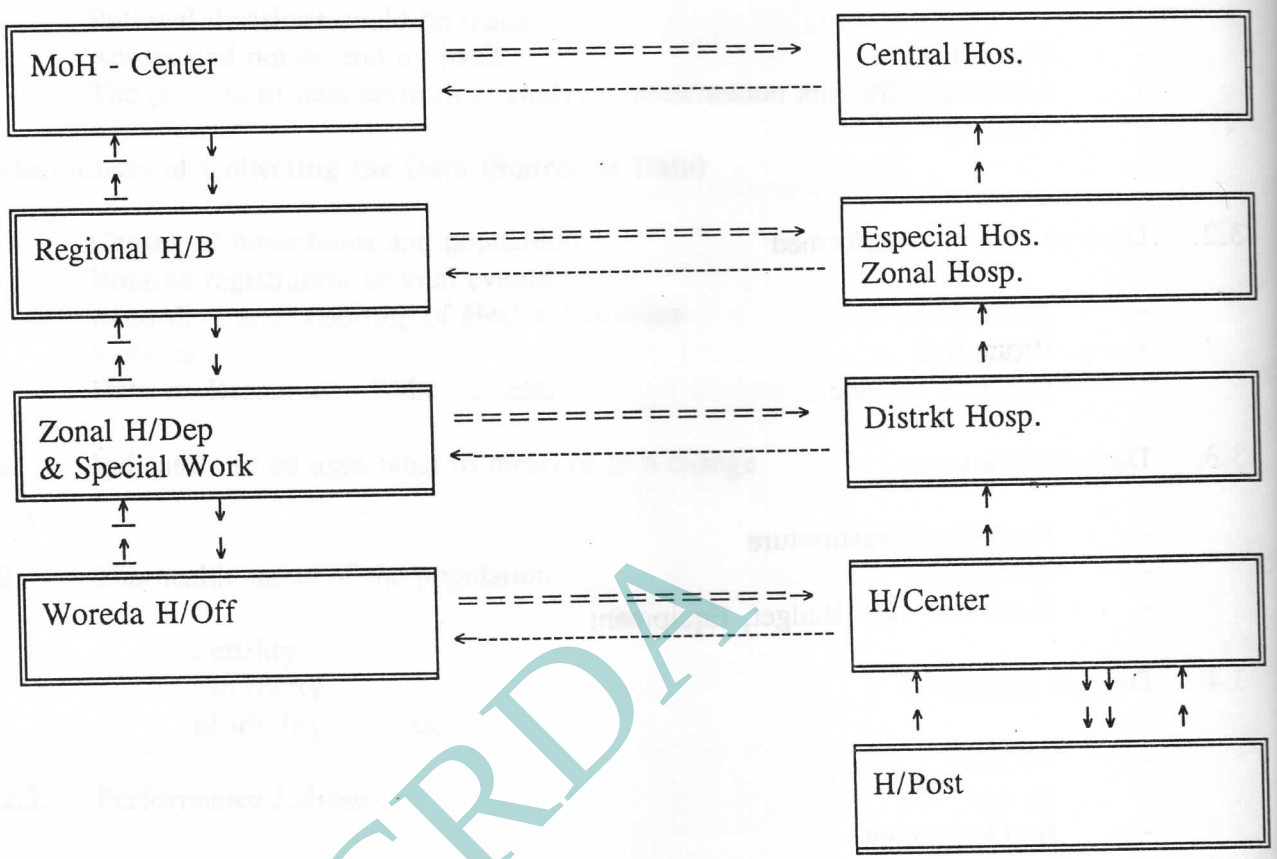
- By area
- By age, sex
- By Occupation

3.5. Others - Health Related.

- Environment
- Socio-Economy .... etc.
- Demographic & Characteristics

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Flow of Reports, Feedback and Referrals

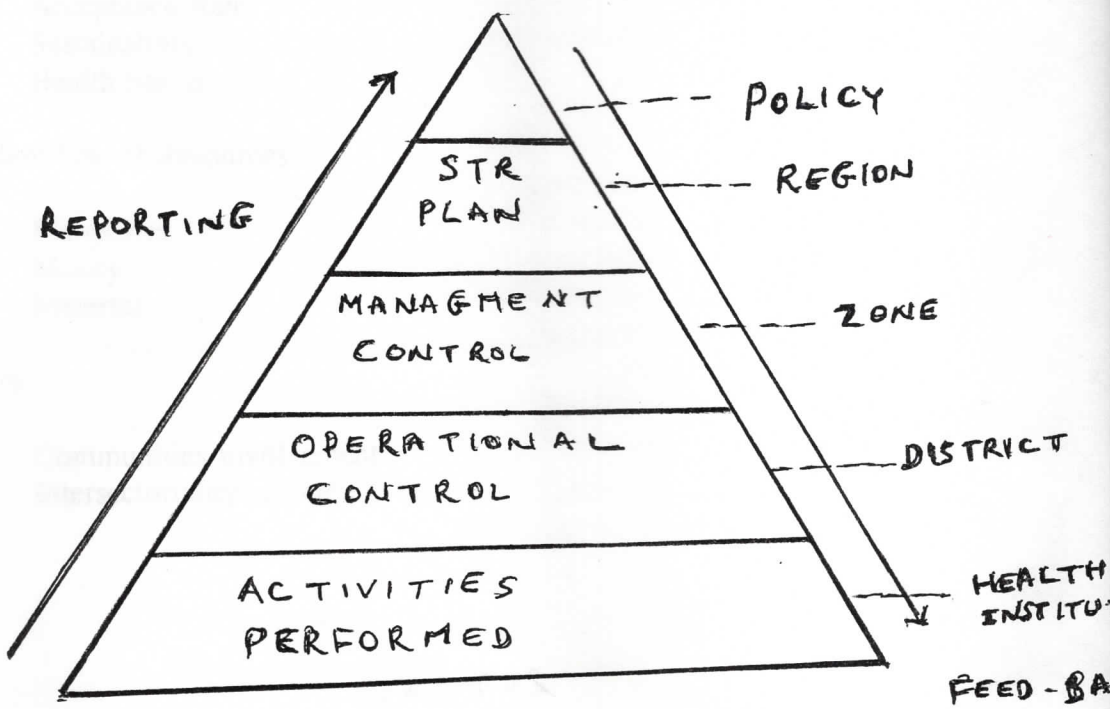


----------→ Flow of Reports

==========→ Feedbacks

- - - - - → Referrals

Flow of Information



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Data Utilization

Efficiently collected information can be used at all levels for :-

- Planning
- Resource identification and allocation
- Problem identification
- Following of cases and revealing trends
- Coverage evaluation
- To develop health Bulletin
- To develop country health profile Po
- Follow up of relevant health situation
- Request of drugs using morbidity Data
- Establishment of staffing norms according to the reported work load-system.

Health Indicators

1. Availability Indicator

1.1. Geographical coverage of the population

$$\frac{\text{Population accessibility} * 100}{\text{Total Population}}$$

This can be calculated for different programmes.

1.2. Health personnel per population

$$\frac{\text{MDs/Nurses/HA}}{\text{Population}}$$

1.3. Available Health Personnel Vs Required.
Available : Required

1.4. Fund Allocated and Utilized

$$\frac{\text{Utilities Fund} * 100}{\text{Allocated Fund}}$$

2.1.6. CDD

$$\frac{\text{No of diarrhea cases who had ORS} * 100}{\text{Total No. of diarrhea cases expected to have seen i.e. 5 episodes per child under 5 years per year.}}$$

2.1.7. ARI

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No. of ARI cases treated * 100

No. of ARI cases expected to be seen in children

2.2. Environmental Health

2.2.1. Water Supply

No. of Households who use safe water supply

Total No. of Households in the area.

2.2.2. Latrines

No. of Household who use latrine properly

Total No. of Households

2.3. Curative Service also calculate the Bed occupancy.
No of In patient visit
Total population

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MONTHLY ACTIVITY REPORT
FOR HOSPITALS AND HEALTH CENTERS

Name of Health Institution _____ **Town** _____

Woreda _____ Zone _____ Region _____

Month _____ Year (Eth. Cal) _____ Name & Signature _____

1. HEALTH EDUCATION

SUBJECT	NUMBER OF SESSIONS	TOTAL NUMBER OF ATTENDANTS

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2. MATERNAL AND CHILD HEALTH (MCH) & STD

Type of Activity	Type of Visit		Number at the Health Institute	Outreach	Total
ANTENATAL	Field Visit				
	Repeat Visit				
	Total				
DELIVERIES ATTENDED	Normal (with out intervention)				
	Abnormal (with intervention)				
	Number refereed to other health institutions				
	Total				
NEW BORN	Normal Birth Weight 2.5kg and above				
	Low Birth Weight (Less than 2.5 kg.)				
	Twins				
	Still Births				
POSTNATAL	Field Visit				
	Repeat Visit				
	Total				
GROWTH MONITORING STATUS	<60%	First			
		Repeat			
	60 - 80%	First			
		Repeat			
	Over 80%	First			
		Repeat			
NRC	First Visit				
	Repeat Visits				
	Discharged				
	Dropoule				
CDD	Number of Cases (<5 yrs.)				
	Number treated with ORT				
	Number treated with IV				
	Number referred				
STD	Number of Cases Seen				
	Number of Contacts traced				
	Number of Positive Contacts				

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POINTS FOR DISCUSSION

1. Do we have standard formats for MCH/FP activities report?
2. Do we have trained personnel to compile and analyze data so that they can be used for action and planning?
3. How do we get reports from low level health facilities?
4. Do we give or receive feedbacks for reports submitted?
5. Who is responsible to record, file, report, compile, analyze datas?
6. How often should MCH/FP activities be reported and to whom?
7. What would be the most appropriate format to use for MCH/FP activities?
8. At each level of services, what the difficulties and barriers are in completing various required reports and forwarding them to the regional and central office on a timely basis.

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