PREGNANCY AND HOW MOTHERS LIFE CHANGES

MATERNAL HEALTH CARE

Maternal health refers to the health of a woman during pregnancy,childbirth and post delivery period upto about 6wks.it encompasses the health care dimensions of family planning,preconception ,prenatal and post natal care in order to reduce maternal morbidity and mortality.

Preconception care can include education,screening of diseases among women of reproductive age group to rduce risk factors that might affect future pregnancies.

The goal of prenatal care is to detect any potential complications of pregnancy early,to prevent them if possible and to direct the woman to appropriate specialist medical servicesas appropriate .

Post natal issues include recovery from child birth,breast feeding and family planning.

In many developing countries,complications of pregnancy and child birth are the leading causes of death among women of reproductive age group.a woman dies from complications of childbirth every minute.according to the WHO poor maternal conditions account for the leading cause of death for women worldwide,after HIV,malaria and tuberculosis.most maternal deaths and injuries are caused by biological processes,not disease,which can be prevented and have been largely eradicated in the developed world,such as **post parturm haemorrhage**(excessive bleeding after child birth) which causes 34 percent of maternal deaths in the developing world,but only 13 percent of maternal deaths in developed countries.

Although high quality ,accessible health care has made maternal death a rare event in developed countries ,where only 1 percent of maternal deaths occur,these complications can often be fatal in the developing countries because single most important intervention for safe motherhood is to make sure that a trained provider with midwifery skills is present at every birth,that transport is available to referral services,and that quality emergency obstetric care is available.

In 2008 342,900 women died while pregnant or from child birth worldwide,which is a lower figure than in the 1980s .this improvement was caused by lower pregnancy rates in some countries ,higher income,which improves nutrition and access to health care,more education for women, and the increasing availability of “skilled birth attendants”(people with training in basic and emergency obstetric care.)

Improving maternal health is the 5^{th} of the united Nations **millennium development goals**,targeting a reduction In the number of women dying during pregnancy and childbirth by three quarters by 2015,notably by usage of skilled birth attendants,contraception and family planning.

PREGNANCY TEST.

All pregnancy tests measure the amount of human chorionic gonadotropin hormone.(hCG).their are two types of pregnancy tests available.the urine test and the blood test.

1. Home pregnancy tests measure the presence of the pregnancy hormone called human chorionic gonadotropin(hCG) in your urine.this hormone ,produced by cells from the placenta ,first enter your blood stream after the fertilized egg(the embryo) implants in the lining of your uterus ,shortly after fertilization.the amount of hCG in your body then increases rapidly over the next few weeks,often doubling every two days or so.
With most pregnancy tests youre much more likely to get an accurate result if you wait a week after your expected period was missed.
A pregnancy test may be negative for several reasons :you may not be pregnant,you may have tested too early,you may have ovulated later than you thought.if you get a negative result ,try again in another few days if you still haven't gotten your period.

2.the other kind of pregnancy test measures the amount of hCG in your bloodstream ,not your urine.blood tests can measure much smaller amounts of the hormone and so can detect pregnancy earlier than urine tests,usually about six to eight days after ovulation.unfortunately blood tests are more expensive ,must be ordered by a physician and require you to give a blood sample.*most women use urine pregnancy tests since they are much easier.*
Once your pregnancy test is positive you can start the process of getting an obstetrician who will follow you throughout your pregnancy and will give you clinic dates to attend.in the case of unavailability of an obstetrician e.g in the very remote areas there is no need to worry the general practitioner and the nurses at the health facilities are highly qualified to follow you up throughout your pregnancy.

HIV AND PREGNANCY.

Hiv in pregnancy is a very wide scope of information,but hear are the highlights.The prevalence of hiv infection in women is almost twice that in men: women 8 percent compared to 4.3 percent for men.

i) ***Impact of hiv infection on pregnancy*** is profound .complications of pregnancy in hiv infection include :

1.increased pregnancy loss (spontaneous abortions)
2.increased incidence of pre-term deliveries with the accompanying increase in Perinatal mortality
3.low birth weight.
4.increased rate of still birth deliveries.

Interventions to reduce mother to child transmission of hiv should include the four prongs of PMTCT(prevention of mother to child transmission):

1.prevention of hiv infection among all women of reproductive age group from getting hiv
2.prevention of unintended pregnancies among hiv positive women
3.effective interventions to reduce hiv transmission to infants during pregnancy ,labor and delivery
4.chronic care and support for hiv infected women,their infants,partners and families.

Attendance of anti natal clinic is important especially in early pregnancy and is critical to the provision of PMTCT.once you have attended your first anc clinic(anti natal clinic) ,your health care provider will give you return dates for check up .

1.All hiv infected women who desire pregnancy should receive preconception care to optimize their health status prior to pregnancy.care for such women usually comes from hiv clinic(comprehensive care clinic) ,the maternal and child health clinic (mch) ,the family planning clinic and community health care workers.
2.All pregnant women should be encouraged to start attending antenatal care(anc) as soon as they know that they are pregnant,**preferably in the first trimester**.recent studies have shown that initiation of ARV prophylaxis(antiretroviral medication) early in pregnancy is associated with lower rates of MTCT (mother to child transmission) Of hiv.
3.All pregnant women should be offered HIV counseling and testing during their first ANC visit .those who turn out to be hiv negative are usually retested in 3 months.
4.all pregnant women who are not tested or opt out or decline HIV testing during the first ANC visit should be offered continued counseling and testing in the subsequent visits.
5.if a woman is HIV positive at the time of enrolment into ANC or becomes pregnant while in care ,a full baseline assessment is usually performed ,this include clinical,psychosocial and laboratory assessment including cd4 cell counts(cells that usually try to fight hiv and other infections,they are usually termed as “the master of the ochestra” as they control your immune system,they kind of like give orders around),and eligibility for ART(anti retroviral therapy) initiation is determined.
6.where available all hiv infected pregnant women should ideally be screened for hepatitis B virus infection and managed accordingly.
7.all hiv infeceted pregnant women ideally should be enrolled into care and continue to receive the full package of antanatal care and comprehensive hiv care including

cotrimoxazole(septrin) porphylaxis ,TB(tuberculosis) screening ,multivitamin and micronutrient supplementation(iron,zinc,folic acid,vitamins)insecticide treated nets in malaria endemic areas,treatment of sexually transmitted diseases.

When to start antiretroviral therapy?

The criteria for initiating antiretroviral therapy for pregnant women are similar to that for non pregnant women.antiretroviral therapy is the most effective method of preventing mother to child transmission.

Initiation of therapy is usually according to WHO staging of the disease and cd 4 count,it might seem complicated to the layman but basically there are 4 WHO stages of hiv . stage 3 and 4 treatment is initiated regardless of cd 4 count., stage 1 and 2 treatment is started when cd 4 is less than 350 cells per mm cubed.(don't be surprised most hiv women I have interacted with know their latest cd 4 count off head) otherwise they are treated with what is known as arv prophylaxis.

ARVS for pmtct in mothers who are not eligible for art(antiretroviral therapy).these are usually women with good cd 4 count and are in good health clinically and immunologically.pregnant women who are not eligible for ART should ideally be started on ARV prophylaxis(anti retroviral prophylaxis).they are usually initiated on a drug called AZT(zidovudine) (300MG twice a day) from 14 weeks of pregnancy or as soon as possible thereafter.at the onset of labour ,they are given AZT(zidovudine) 600mg plus 3TC(lamivudine) 300mg plus NVP(nevirapine) 200mg at once , followed by AZT(300mg twice a day) and 3TC(150mg twice a day) for seven days post delivery.

Although ARV prophylaxis(antiretroviral prophylaxis) should be started by your health care provider at 14 weeks gestation or at first contact after 14 weeks gestation ,adequate patient preparation through patient education,counseling and support is usually done and is important to avoid non adherence.

Monitoring of pregnant women on antiretroviral therapy .

Pregnant women initiated on anti hiv medication are ideally followed up every 2 weeks for the first 8 weeks ,then monthly thereafter,or as clinically indicated by your doctor.

Infant ARV prophylaxis.

Hiv exposed infants newly born to women on antiretroviral therapy usually receive 6 weeks of daily nevirapine irrespective of breast feeding practices.

Hiv exposed infants of mothers not on ART(antiretroviral therapy) usually receive daily nevirapine until one week after complete cessation of breast feeding.

Infants who are not breastfeeding should receive 6 weeks of daily nevirapine.

HOW MOTHERS LIFE CHANGES DURING PREGNANCY

5 weeks…you may notice some pregnancy related discomforts already many women report sore breasts,fatigue and frequent urination,you may also have nausea,its important to avoid alcohol throughout your pregnancy since no one knows how much or how little alcohol can harm a developing baby.

6 weeks….you may find yourself developing abit of a split personality feeling moody one day and joyful the next,what your going through is normal.the emotions are caused partly by fluctuating hormones.spotting(spots of blood on your underpants or toilet tissue after urinating) or bleeding is relatively common in early pregnancy affecting upto aquarter of pregnant women.it may occur in a normal pregnancy,but sometimes it can be the first sighn of miscarriage or an ectopic pregnancy.call your doctor if you have spotting or bleeding

7weeks….your uterus has doubled in size in the past five weeks and eating may be difficult due to morning sickness.you may need to pee more than usual,due to your increasing blood volume and the extra fluid being processed through your kidneys.about half of the women who feel nauseated during the first trimester will find complete relief by about 14 weeks.for some women it will take another month or so for the nausea to ease up

8 weeks…rising levels of hormones cause breast growth and other tissue changes,all in preparation for lactation.your breasts may continue to grow throughout pregnancy.

9weeks….you may not look pregnant even if your waist is thickening abit.not only are morning sickness and other physical symptoms out in full force for most women,but you may also feel more emotional,mood swings are common,its perfectly normal to feel elated and terrified about becoming a parent.most women find that moodiness flares up at around six to ten weeks and eases up in second trimester.

10 weeks….at your next prenatal visit you may be able to hear your babys rapid heartbeat with the help of a doppler stethoscope.before you got pregnant your uterus was the size of a small pear by this week its as big as a grape fruit.

11 weeks….your feeling abit more energetic and your nausea may be starting to wane,unfortunately you may also be suffering from constipation(caused by hormonal changes,which can slow digestion) and heartburn(hormones again,relaxing the valve between your stomach and esophagus)

12 weeks….your uterus has grown to the point where your healthcare provider can now feel the top of it.(the fundus) low in your abdomen,just above your pubic bone.you may begin to feel heartburn(also called acid indigestion) a burning sensation that often extends from the bottom of your breastbone to your lower throat.during pregnancy the placenta produces a lot of the hormone progesterone ,which relaxes the valve that separates the esophagus from the stomach.particularly when your lying down,gastric acid can seep back up the pipe,which causes the uncomfortable burning sensation.

13weeks….this is the last week of your first trimester and your risk of miscarriage is now much lower than earlier in pregnancy.next week marks the beginning of your second trimester a time of relative comfort for many women who see early pregnancy symptoms such as morning sickness and fatigue subside.

14 weeks….welcome to second trimester ,your breasts may be feeling less tender,the top of your uterus is abit above your pubic bone,starting to show a “baby bump” can be quite a thrill,giving you and your partner visible evidence of the baby you have been waiting for.

15 weeks….your probably gaining weight by now.you may experience some unexpected symptoms such as your nose being stuffy,some pregnant women also suffer nose bleeds as a result of increased blood volume and blood vessel expansion in the nose.

16 weeks….the top of your uterus is about half way between your pubic bone and your navel.youre probably feeling awhole lot better as you settle into pregnancy.less nausea ,fewer mood swings and glowing skin contribute to an overall sense of wellbeing.soon you will experience one of the most wonderful moments of pregnancy,feeling your baby move.(quickening).while some women notice quickening as early as 16 weeks ,many don’t feel their baby move until about 18 weeks or more.(n/b if this is your first baby don’t be too impatient you may not be aware of your babys movements until 20 weeks or so.)

17 weeks….as your belly grows your centre of gravity changes,so you may begin to occasionally alittle unsteady on your feet.try to avoid situations with a high risk of taking a tumble.

18 weeks….an increase in appetite is common..your cardiovascular system is undergoing dramatic changes and during this trimester your blood pressure will probably be lower than usual.dont spring up too fast from a sitting or lying position or you might feel alittle dizzy.from now on when you lie down its best you lie on your side(left).when you lie flat on your back your uterus can compress a major vein,leading to decreased blood return to your heart.if you haven’t already had a 2nd trimester ultrasound ,you will probably have

one soon.this painless procedure helps your doctor check how your baby is growingscreen for certain birth defects,check the placenta and umbilical cord.determine whether the due date youre working with is accurate and see how many babies youre carrying.

19 weeks….you may notice some achiness in your lower abdomen or even an occasional brief stabbing pain on one or both sides especially when you shift position or at the end of an active day.most likely this is round ligament pain.the ligaments that support your uterus are stretching to accommodate its increasing weight.you may notice skin changes red palms from extra estrogen.you may also have patches of darkened skin caused by a temporary increase in pigment.when this darker patches appear on your upper lip,cheeks and forehead they are called chloasma. Or the " mask of pregnancy"you may also notice some darkening of your nipples ,freckles,scars,underarms,inner thigh and vulva.that darkened line running from your belly button to your pubic bone is called the linea nigra or "dark line"these darkened spots will probably fade shortely After delivery meantime protect yourself from the sun,which intensifies the pigment changes.use sunscreen when outdoors.

20 weeks….you have hit the halfway mark in your pregnancy.the top of your uterus is now level with your belly button and you are likely to have gained weight by now.during pregnancy your body needs more iron.common non meat sorces of iron include legumes,soy based products,spinach,prune juice,raisins and iron fortified cereals.

21 weeks….youre probably comfortable now,the usual discomforts associated withearly pregnancy are mostly gone,you may have increased oil production ,which may contribute to development or (worsening) of acne.you can wash with a gentle soap or cleanser twice a day.dont tak any oral acne medications.some are very hazardous during pregnancy.always check with your doctor first.you are also prone to varicose veins.as your pregnancy progresses there is increasing pressure in your veins in your legs,high progesterone levels which may cause the walls of your veins to relax.to help prevent or minimize varicose veins,exercise daily,prop up your feet and legs whenever possible,sleep on your on your left side.

23 weeks….you may notice that your anles and feet start to swell.abit in the coming weeks or months,especially at the end of the day or during the hot weather.lie on your left side or put your feet up when you can,stretch out your legs when you sit.stay hydrated,drink plenty of water.while a certain amount of edema in your lower extremities is normal during pregnancy,excessive swelling may be a sign of a serious condition called pre eclampsia,be sure to call your doctor if you have severe or sudden swelling of your feet and ankles.

24 weeks….the top of your uterus has risen above your belly button.most women have a glucose screening test(also called a glucose challenge test or gct) between now and 28 weeks.this test checks for gestational diabetes,a pregnancy related high blood sugar condition.untreated diabetes increases your risk of having a difficult vaginal delivery or

needing cesarean section because it causes your baby to grow too large,it also raises your babys chances of getting other complications like low blood sugar right after birth.
Its important to learn sighns of preterm labour at this point.this is labour occurring before 37 weeks,while there are some known risk factors for preterm labour such as genital tract infections,placenta problems,or dervical insufficiency
Call your doctor if you are having any of the following symptoms
1.an increase in vaginal discharge
2.a change in the type of discharge
3.any vaginal spotting or bleeding
4.abdominal pain,menstrual like cramping or more than 4 contractions in one hour
5.any increase in pressure in the pelvic area(a feeling that your baby is pushing down)
6.low back pain,especially if you didn't previously have back pain.

25 weeks…your hair may look more full and lustrous its not that your growing more hair,but thanks to hormonal changes the hair that you would normally shed is sticking around longer than usual.drink plenty of water and avoid contact sports.
When you have your glucose screening test at 24 – 28 weeks a second tube of blood may be taken at the same time to check for anaemia.if blood tests show that you have iron deficiency anemia,your caregiver will probably recommend you take iron supplements

26 weeks….pre eclampsia a serious disorder characterized by high blood pressure and protein in your urine shows up around this time after 20 weeks gestation.its important to be aware of the signs.call your doctor if you have swelling in your face or puffiness around your eyes,excessive or sudden swelling of your feet or ankles.symptoms include severe headache, vision changes including double vision,intense pain or tenderness in your upper abdomen or vomiting.

27 weeks….the 2nd trimester is drawing to a close.before you reach 37 weeks,there are some symptoms you should never ignore.call your doctor if
1.your baby is moving or kicking less than usual
2.severe or persistent abdominal pain or tenderness
3.vaginal bleeding or spotting,or watery discharge.
4.pain or burning when your urinating.
5.severe or persistent vomiting
6.fever or chills
7.blurred or double vision
8.severe or persistent headache
9.one leg significantly more swollen than the other
10.trauma to your abdomen

28 weeks…thirdand final trimester starts this week,depending on your risk factors your doctor may recommend repeating blood tests for hiv and syphilis as well as doing cultures for Chlamydia and gonorrhea,to be certain of your status before delivery.

If the blood work done at your first prenatal visit showed that your Rh negative,you will get an injection of Rh immunoglobulin to prevent you from developing antibodies that could attack your baby.

29 weeks….let your doctor know if your baby is becoming less active.the pregnancy hormone progesterone relaxes smooth muscles tissue through out your body,including your gastrointestinal tract,this relaxation together with the crowding in your abdomen,slows digestion,sluggish digestion can cause gas and heartburn and contribute to constipation.to prevent constipation eat a high fibre diet,drink plenty of water and get some regular exercise.

30 weeks….due to hormonal changes your ligaments are more lax ,so your joints are looser, some women also experience mood swings.

31 weeks….some women feel random uterine contractions called Braxton hicks contractions often lasting about 30 seconds,they are irregular they should be infrequent and painless.frequent contractions even those that don't hurt may be a sign of preterm labor.
You may have noticed some leaking of colostrums or "pre milk" from your breasts,if so try tucking some nursing pads into your bra to protect your clothes,but if not,nothing to worry about your breasts are making colostrums all the same,even if you don't see any.

32 weeks….your blood volume has increased 40 to 50 percent since you got pregnant.with your uterus pushing up near your diaphragm and crowding your stomach,the consequences may be shortness of breath and heartburn.
Your expanding uterus shifts your centre of gravity and stretches out and weakens your abdominal muscles,changing your posture and putting a strain on your back

33 weeks….

34 weeks…by this week fatigue has set in.your tiredness is probably from the physical strain your in.

35weeks….your uterus now reaches up under your rib cage.its crowding other organs and may cause an increase in urination habits

36 weeks….you may have less heartburn when your baby starts descending into your pelvis a process called lightning often happens just before labor if this is your first baby.

37 weeks….braxton hicks contractions may be more frequent you may notice an increase in vaginal discharge.if you see some "bloody show" (mucus tinged with a tiny amount of blood) in the toilet or in your undies,labor is probably close.

38 week… the next few weeks are a waiting game to go into labor.

39 weeks….while your waiting for labor pay attention to your babys movements.let your doctor know if the movements reduce in number.also let your doctor know if your water may have broken membranes before onset of labor.

40 weeks….if your not in labor,even with reliable dating some women have prolonged pregnancies ,be sure to visit your doctor ,you may have a biophysical profile which consists of an ultrasound to look at your babys overall movements ,breathing movements muscle tone as well as amniotic fluid.fetal heart rate monitoring.if the fetal tests are not reassuaring you will be induced.
Labor is a sequence of uterine contractions that result in effacement(incorporation of the cervix into the uterus) and dilatation of the cervix leading to expulsion of the fetus vaginally.

POST MATERNAL INFORMATION

The period of time following delivery of the child during which the body tissues,especially the reproductive system reverts back to the pre-pregnant state is known as puerperium.
Puerperium lasts for 6 weeks and it involves restoration of the mothers body before pregnancy and to regain proper health.

ANATOMICAL CHANGES OF REPRODUCTIVE ORGANS
1.UTERUS…after delivery it's the size of a 20 week pregnancy , weighs 1 kg and by the sixth week post delivery has gone back into the pelvis and weighs 60 to 100 grams.

.LOCHIA LOSS….. lochia is the post delivery uterine discharge consisting mainly of blood and dead tissue that occurs four weeks after delivery.
.lochia rubra …..occurs in the first 3 to 4 days.red in color principally blood, fetal membranes ,dead tissue and cervical discharge.
.lochia serosa ….this is when the color of the discharge changes to brown then yellow and lasts for a week.the discharge contains white blood cells ,wound discharge and mucus from the cervix.
.lochia alba……is whitish turbid fluid lasts for one to two weeks.consists of mucus, and white blood cells.
.offensive smelling lochia….this indicates the presence of bacteria and pus in the discharge.if the discharge from your vagina has an offensive smell there might be presence of an infection it is important to see your health care provider immediately for assistance.he or she may start you on a course of antibiotic medication to fight the infection.

2.CERVIX(lower part of your uterus)….immediately after delivery its 2 to 3 cm,flabby irregular and with post birth trauma.by one week it only admits a finger and by 6 weeks is fully healed.

PHYSIOLOGICAL CHANGES

1.vital signs –the pulse rate increases with labor and varies for 48 hrs.however if you have awareness of your heart beat ,chest pain or some difficulty in breathing you will need to see your health care provider for an evaluation.
Your temperature is usually below 37.0 degrees Celsius after labor ,it renormalizes by 24 hrs.if your having a fever or have a thermometer with you and it reads above 38 degrees Celsius then it might be a sign of infection and you need to see your health care provider for evaluation.

2.blood volume usually drops after delivery in part due to the blood loss that occurs during delivery.

3.weight loss…4 kgs are lost at delivery an added 3kgs are lost during puerperium.
4.gastro intestinal system(digestive system)…. thirst in the first two days usually due to loss of blood ,urine and sweating.constipation usually from dehydration and pain in the abdominal or perineal wounds.

5.hormonal changes….the hormones estrogen and progesterone levels decline .these levels may persist as low in breast feeding mothers.in non lactating mothers the resumption of menstruation may occur by 4 to 6 weeks.
The hormone prolactin increases and helps in release of milk from the breasts.

Ideally a post delivery mother is usually not discharged from hospital immediately.she is usually taught how to breast feed her new born,she is assessed for any emotional disturbances that might require psychiatric care,if she had a tear which was repaired its initial healing is assessed by the doctor,mother is advised on when to resume sexual relationships(this is individualized),advise is also given on contraceptive choices,the baby starts to receive the first immunizations and mother advised on return dates for vaccine schedules.
Ideally all mothers should present for postpartum(post delivery) examination at a health facility at six weeks.

CONTRACEPTION

After child birth it is important to have by now considered modes of contraception.mostly used contraception by women are hormonal which entail female sex steroids. i.e Synthetic estrogen and synthetic progesterone.
There are 3 common modes of administering these hormonal variants.; Oral,implants or injectables. Your health care provider should be able to take you through the various types of contraception and at the end of the session you should be able to have chosen one.

A. ***ORAL CONTRACEPTION.***

1.combined oral contraceptives…..was first licensed in uk in 1961.it contains a combination of 2 hormones ,synthetic estrogen and a progestogen(a synthetic derivative of progesterone).they are easy to use and provide a very high degree of protection against pregnancy.most brands contain 21 pills,one pill taken daily ,followed by a 7 day pill free interval.

These form of contraception is however not recommended for breast feeding mothers the hormones might interfere with milk production.

2.progestogen only contraceptives….can be safely used if a woman has cardiovascular risk factors i.e heart problems,blood clots,artery and vein diseases.its variants include the "mini pill" ,implants ,injectables.the pills are indicated in breast feeding mothers.

B.***INJECTABLES.***

Two injectable progestogens are marketed :

1.depot medroxyprogesterone acetate,also known as "depoprovera" ,given as 150 mg as an intramuscular injection every 12 weeks.

2.norethisterone enanthate also known as "noristerat" usually given as 200mg every 8 weeks for 24 weeks,then every 8 wks.

Most women choose depo provera and each injection lasts 12 wks.

c.***IMPLANTS***

1.jadelle contains two rods of the hormone levornogesterol,each rod with 75 mg lasts 3yrs to 5 yrs.

2.norplant contains 6 rods each with 36 mg levornogestrel.it lasts for 3 yrs.

3.implanon consists of a single silastic rod and is inserted under the skin and releases progestogen.

d.***EMERGENCY CONTRACEPTION***

are taken within 72 hrs post coitus. Include: postinor ,microgynon and eugynon.

In as much as hormonal contraception is most popular there are permanent options like tubal ligation and vasectomy for the men,visit your health facility and make an informed decision on the most appropriate contraception for you.