USE OF PARTOGRAPH/PARTOGRAM IN MANAGEMENT OF FIRST STAGE OF LABOUR.

The partogram is a printed chart on which observations in labor are recorded in a graphic format to provide an overview of labor, aiming to alert midwives and obstetricians to deviation in labor progress as well as maternal or fetal wellbeing. The observations consist of fetal vital signs, maternal vital signs, features of labor and therapeutics undertaken in the course of the labor. The chart often contains an alert line (a signal of alert to deviations in labor progress) and an action line, which is the mandatory time to commence actions to correct the deviations in labor progress. A partogram is a chart on which the progress of labour over time can be presented. You will notice that provision has been made on the chart to record all the important observations regarding the condition of the mother, the condition of the fetus, and the progress of labour. The condition of the mother, the condition of the fetus, and the progress of labour are recorded on the partogram.

The first oblique line is called the ALERT LINE.
An alert line is a visual representation of a cervical os dilatation rate of 1 cm per hour labor progress sustained throughout the active phase, and is the slowest rate of active phase labor progress for normal labor outcome. The alert line represents the minimum progress in cervical dilatation which is acceptable during the active phase of the first stage of labour. This is so because normal labor progress in active phase is defined as a minimum cervical os dilatation rate of 1 cm per hour and therefore a labor progress less than 1 cm per hour is diagnosed as slow labor progress. In clinical practice, when labor observations are elicited as baseline at admission in active phase, and at subsequent assessment for progress, and then plotted on the partogram, any cervical os dilatation rate of less than 1 cm per hour will cross the alert line, which will visually show this as slow labor progress. Thus, essentially, the alert line is a visual prompt to aid recognition of slow labor progress by the midwives and obstetricians and others who provide care for women in labor. Difficult labour (or dystocia) is characterized by abnormally slow labour progress arising from inefficient uterine contractions, abnormal fetal presentation or position, inadequate bony pelvis or abnormalities of the pelvic soft tissues of the mother. Evidence suggests that up to one third of first-time mothers experience delay in the first stage of labour.

The second oblique line is called the ACTION LINE. Its importance include:

1. Any patient whose graph of the cervical dilatation falls on or crosses the action line must have a complete examination by the doctor. Her further management must be under the doctor’s supervision and direction. If a patient is not already in hospital, she will need to be transferred into a hospital where there are facilities for instrumental delivery and Caesarean section.
2. The progress of labour is very slow when the graph of cervical dilatation crosses or falls on this line. When this occurs, action must be taken in order to hasten the delivery of the infant.

**RECORDING THE CONDITIONS OF THE MOTHER**

**1,RECORDING THE BLOOD PRESSURE, PULSE AND TEMPERATURE.**

The maternal blood pressure, pulse and temperature should be recorded on the partogram.

 **2, Recording the urinary data**

1. Volume is recorded in ml.
2. Protein is recorded as 0 to 4+.
3. Ketones are recorded as 0 to 4+

**RECORDING THE CONDITION OF THE FETUS**

**3,Recording the fetal heart rate pattern**

The following two observations must be recorded on the partogram:

1. The baseline heart rate.
2. The presence or absence of decelerations. If decelerations are present, you must record whether they are early or late decelerations

**D. Recording the liquor findings**

Three symbols are used:

I = *Intact* membranes.

C = *Clear* liquor draining.

M = *Meconium-stained* liquor draining (see figure 8C-3).

**E. How often should you record the liquor findings?**

The recordings should be made:

1. At each vaginal examination.
2. Whenever a change in the liquor is noted, e.g. when the membranes rupture or if the patient starts to drain meconium-stained liquor after having had clear liquor before.

**RECORDING THE PROGRESS OF LABOUR**

**F. Recording the cervical dilatation**

Cervical dilatation is measured in cm and then recorded by marking an ‘X’ on the partogram.

**G. Recording the length of the cervix (effacement)**

The length of the cervix is recorded by drawing a thick, vertical line on the same part of the chart that is used for the cervical dilatation. The length of the line drawn indicates the length of the endocervical canal in cm. It is drawn on the chart whenever the cervical dilatation is recorded. Alternatively, the length of the endocervical canal, measured in cm or mm, can be noted in the space provided.

**H. Recording the amount of the head palpable above the brim of the pelvis (descent and engagement)**

The findings are recorded by marking an ‘O’ on the partogram

**I. Recording the position of the fetal head**

The position of the fetal head is recorded by marking the ‘O’ with fontanelles and the sagittal suture. Alternatively, the position can be noted (e.g. ROA) in the space provided . This is recorded at every vaginal examination.

**J. Recording moulding of the fetal head**

The degree of moulding (i.e. 0 to 3+) is also recorded on the partogram.

**K. Recording the duration of contractions**

The duration of contractions is also recorded on the partogram. The block is stippled if the contractions last less than 20 seconds (i.e. weak contractions), the block is striped if the contractions last between 20 and 40 seconds (i.e. moderate contractions) and the block is coloured in completely if the contractions last 40 seconds or longer (i.e. strong contractions).

**L. Recording the frequency of contractions**

The number of contractions occurring within 10 minutes is recorded by marking off 1 block for each contraction, e.g. 2 blocks marked off equals 2 contractions in 10 minutes, 4 blocks marked off equals 4 contractions in 10 minutes, and 5 blocks if 5 or more contractions in 10 minutes.

**M. Recording drugs and intravenous fluid given during labour**

In the space provided on the partogram you should record:

The name of the drug.

The dose of the drug given.

The time the drug was given.

The type of intravenous fluid.

The time the intravenous fluid was started.

The rate of administration.

The amount of intravenous fluid given (after completion).

**N. Assessment and management**

After each examination an assessment must be made and recorded on the partogram. All management in labour must also be recorded on the partogram.

**O. Recording the time on the partogram**

The time, to the nearest half hour, should also be entered on the partogram whenever an observation is recorded, medication is given, an assessment is made or management is altered.

2, MANAGEMENT OF SECOND STAGE AND THIRD STAGE

The second stage of labor is regarded as the climax of the birth by the delivering woman, her partner, and the care provider. International health policy and programming have placed emphasis on the first stage of labor, including appropriate use of the partogram and identification of hypertension or sepsis, and have also focused on the third stage of labor with active management (AMTSL). More recently, a concerted effort to reduce perinatal losses has been made through dissemination of skills in neonatal resuscitation. However, the provision of skilled care and avoidance of complications during the second stage of labor have been relatively neglected. These guidelines are intended to strengthen policy and frameworks for care provision to enable providers to attend to women in the second stage of labor in line with current evidence‐based recommendations for practice to optimize outcomes for mother and baby.

Second stage of labour involves stages from full dilatation of the cervix up to the birth of the singleton baby or the last baby in a multiple pregnancy. At the start of the second stage, the fetal presenting part may or may not be fully engaged (meaning that the widest diameter has passed through the pelvic brim), and the woman may or may not have the urge to push.

While in most instances there is sufficient reserve to maintain oxygenation of the fetus during the second stage of labor even though the uteroplacental circulation is reduced, in some circumstances both the fetal and maternal condition can deteriorate rapidly. Deterioration can occur both in pregnancies with known complications, such as pre‐eclampsia or intrauterine growth restriction, but also unpredictably in low‐risk pregnancies . Thus, antenatal risk assessment and the status in the first stage of labor, such as represented by a normal partogram, are not reliable predictors of normal outcomes. Important potential complications arising in the second stage of labor are fetal hypoxia and acidemia leading to “birth asphyxia,” failure of the presenting part to rotate or descend appropriately leading to obstructed labor, and worsening or new manifestations of maternal hypertension leading to eclampsia. Mothers with pre‐existing cardiac disease or severe anemia may be at risk of heart failure during the second stage owing to the additional circulatory demands of active pushing.

During the second stage of labor, skilled attendants should:

* Continuously provide information, support, and encouragement to the woman and her companion.
* Encourage active pushing once the urge to bear down is present, with encouragement to adopt any position for pushing preferred by the woman, except lying supine which risks aortocaval compression and reduced uteroplacental perfusion.
* Listen frequently (every 5 minutes) to the fetal heart in between contractions to detect bradycardia.
* Check the maternal pulse and blood pressure, especially where there is a pre‐ existing problem of hypertension, severe anemia, or cardiac disease.
* Observe progressive descent and rotation of the presenting part. This includes observing progressive distension of the perineum and visibility of the presenting part, and vaginal examination especially where progress appears to be slow.
* Conduct the delivery with support for the perineum to avoid tears, and use of episiotomy only where a tear is very likely.
* Be ready to augment contractions with an intravenous oxytocin infusion during the second stage where contractions have become infrequent and where the fetal heart rate remains normal, to avoid the need for instrumental vaginal delivery or transfer.
* Be ready to undertake instrumental vaginal delivery (vacuum or forceps) where indicated for fetal bradycardia or nonadvance of the presenting part.

Close monitoring and the skills and capacity to offer timely intervention are required for all births to prevent adverse outcomes. High‐quality care in the second stage of labor is necessary to prevent stillbirth and newborn complications arising from undetected hypoxia and acidemia, as well as maternal mortality and morbidity from complications such as vesicovaginal fistula, genital tract lacerations, infection, hemorrhage , as well as worsening of hypertensive disease.

This is the stage in labor where the contribution of a qualified and skilled attendant with midwifery skills is the most critical in ensuring a safe outcome.

While attending a delivery, the timing and process of active pushing should be guided so that this is encouraged only when the cervix is fully dilated and when the presenting part has engaged in the pelvis and the woman feels the urge to push. The skilled attendant also has the role of encouraging the mother to adopt positions for active pushing that are culturally appropriate, comfortable, and mechanically beneficial; for example, squatting or sitting up as opposed to lying flat on a bed. Unfortunately, in many hospitals in low‐resource countries, lying supine while in labor has become the norm—a tendency exacerbated by a lack of available cushions or the use of nonflexible delivery beds where the upper part cannot be elevated—and the use of stirrups is common.

 **Initiation of active pushing**

A woman should be encouraged to push when full cervical dilatation, the fetal condition, and engagement of the presenting part have been confirmed, and the woman feels an urge to bear down. Even when the woman feels the urge, pushing should only be encouraged during a contraction. In the absence of the urge to push and in the presence of a normal fetal heart rate, care providers should wait before encouraging active pushing in primiparous women and women who have had an epidural for up to but not longer than 4 hours, and in multiparous women for up to but not longer than 1 hour . The basis for this recommendation is that under normal circumstances at the end of the first stage of labor, uteroplacental perfusion and fetal oxygenation only start to deteriorate once active pushing commences.

 **Duration of active pushing in the second stage of labor**

Primiparous women should not actively push for more than 2 hours and multiparous women for more than 1 hour, owing to an increased risk of birth asphyxia and maternal infection. Lack of descent of the presenting part may also indicate obstructed labor. Intervention should be considered promptly and options evaluated and acted upon before these indicative time periods if the maternal and/or fetal condition deviates from normal; for example, in the presence of fetal bradycardia or severe maternal hypertension.

**Maternal and fetal monitoring during the second stage**

Maternal parameters should be monitored when the second stage of labor is confirmed and thereafter, and for specific indications such as a history of high blood pressure, prolonged labor, and previously identified abnormal fetal heart rate.

Equipment in good working order and devices that simplify detection of the fetal heart should be available at the recommended frequency . The frequency of fetal heart auscultation should be every 5–10 minutes or more often when bradycardia is suspected. One can get the best information about the condition of the fetus, and it is easiest to hear, by auscultating immediately after a contraction. The care provider should have the skills to interpret the fetal heart rate and take appropriate action when needed. While the traditional Pinard stethoscope (fetoscope) may be adequate in very quiet labor rooms, it is often difficult to use reliably owing to surrounding noise or maternal obesity, and especially in the second stage because of the woman's naturally vigorous movements. Wide availability of robust handheld Doppler devices with battery backup and/or wind‐up recharging technology should be part of standard equipment provision for safe maternity care. Service planners and managers should prioritize procurement and regular maintenance of such devices.

 **Position of the woman during the second stage of labor**

The delivery facility should have adequate space, equipment, and skilled care providers for the woman to deliver in a position of her choice, including upright positions. Unfortunately, inappropriate medical and midwifery teaching and habit have meant that many women are made to deliver lying flat on their backs with their feet in stirrups . This position reduces uteroplacental blood flow, can contribute to fetal distress, and provides no mechanical advantage to enhance descent.

**Use of oxytocin during the second stage of labor**

Intramuscular oxytocin administration before delivery is contraindicated. Intravenous oxytocin should be administered only according to a health facility protocol (describing indications, dose, and intravenous route) by a trained care provider. A typical intravenous oxytocin infusion regime for labor augmentation is described by the World Health Organization (WHO). It should be noted that infusions based on counting drops in the intravenous giving set can result in highly inaccurate oxytocin dosing, and where an infusion pump is not available the resulting contraction frequency and strength should be observed especially carefully to avoid hyperstimulation. Where the contractions are poor and the fetal presentation, position, and heart rate have been confirmed as normal, the use of oxytocin infusion may reduce the need for instrumental vaginal delivery.

 MANAGEMENT OF 3RD STAGE OF LABOR

The third stage of labour starts immediately after the delivery of the infant and ends with the delivery of the placenta and membranes. The normal duration of the third stage of labour depends on the method used to deliver the placenta. It usually lasts less than 30 minutes, and mostly only 2 to 5 minutes.

Third stage of labor involves:

1. Uterine contractions continue, although less frequently than in the second stage.
2. The uterus contracts and becomes smaller and, as a result, the placenta separates.
3. The placenta is squeezed out of the upper uterine segment into the lower uterine segment and vagina. The placenta is then delivered.
4. The contraction of the uterine muscle compresses the uterine blood vessels and this prevents bleeding. Thereafter, clotting (coagulation) takes place in the uterine blood vessels due to the normal clotting mechanism.

There are two ways of managing the third stage of labour:

1. The active method.
2. The passive method.

Whenever possible, the active method should be used. However, a midwife working on her own may need to use the passive method. Midwives who choose to use the passive method of managing the third stage of labour *must* also be able to confidently use the active method, as this method may have to be used in some patients.

**Active management of the third stage of labour include:**

1. Immediately after the delivery of the infant, an abdominal examination is done to exclude a second twin.
2. An oxytocic drug is given if no second twin is present.
3. When the uterus contracts, controlled cord traction must be applied:
	* Keep steady tension on the umbilical cord with one hand.
	* Place the other hand just above the symphysis pubis and push the uterus upwards. Controlled cord traction is also called the Brandt-Andrews method (manoeuvre).
4. Placental separation will take place when the uterus contracts. When controlled cord traction is applied the placenta will be delivered from the upper segment of the uterus.
5. Once this occurs, continuous light traction on the umbilical cord will now deliver the placenta from the lower uterine segment or vagina.
6. If placental separation does not take place during the first uterine contraction after giving the oxytocic drug, wait until the next contraction occurs and then repeat the manoeuvre

**What is the passive method of managing the third stage of labour?**

1. After delivery of the infant the signs of placental separation are waited for.
2. When the signs of placental separation appear, the patient is asked to bear down and the placenta is delivered spontaneously, by maternal effort only.
3. Only after the placenta has been delivered is an oxytocic drug given.