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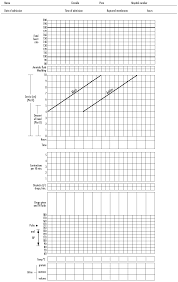
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1. Use of partograph in the management of first stage of labour

* **First stage**: from the onset of regular painful contractions associated with descent of the presenting part and progressive dilatation of the cervix until the cervix is fully dilated.

**The partograph**; is a graphical presentation of the progress of labour, and of fetal and maternal condition during labour. It is the best tool to help you detect whether labour is progressing normally or abnormally, and to warn you as soon as possible if there are signs of fetal distress or if the mother’s vital signs deviate from the normal range. Research studies have shown that maternal and fetal complications due to prolonged labour were less common when the progress of labour was monitored by the birth attendant using a partograph.



The graph sections of the partograph are where you record key features of the fetus or the mother in different areas of the chart;

* Immediately below the patient’s identification details, you record the Fetal Heart Rate initially and then every 30 minutes. The scale for fetal heart rate covers the range from 80 to 200 beats per minute.
* Below the fetal heart rate, there are two rows close together. The first of these is labeled Liquor – which is the medical term for the amniotic fluid; if the fetal membranes have ruptured, you should record the color of the fluid initially and every 4 hours.
* The row below ‘Liquor’ is labeled Moulding; this is the extent to which the bones of the fetal skull are overlapping each other as the baby’s head is forced down the birth canal; you should assess the degree of moulding initially and every 4 hours
* Below ‘Moulding’ there is an area of the partograph labeled Cervix (cm) (Plot X) for recording cervical dilatation, i.e. the diameter of the mother’s cervix in centimeters. This area of the partograph is also where you record Descent of Head (Plot O), which is how far down the birth canal the baby’s head has progressed. You record these measurements as either X or O, initially and every 4 hours. There are two rows at the bottom of this section of the partograph to write the number of hours since you began monitoring the labour and the time on the clock.
* The next section of the partograph is for recording Contractions per 10 mins (minutes) initially and every 30 minutes.
* Below that are two rows for recording administration of Oxytocin during labour and the amount given. (You are NOT supposed to do this – it is for a doctor to decide! However, you will be trained to give oxytocin *after* the baby has been born if there is a risk of postpartum hemorrhage.)
* The next area is labeled Drugs given and IV fluids given to the mother.
* Near the bottom of the partograph is where you record the mother’s *vital signs*; the chart is labeled Pulse and BP (blood pressure) with a possible range from 60 to 180. Below that you record the mother’s Temperature in °C (temperature).
* At the very bottom you record the characteristics of the mother’s Urine: protein, acetone, volume. You learned how to use urine dipsticks to test for the presence of a protein (albumin) during antenatal care.

***Recording and interpreting the progress of labour***

Normally progressing labour is characterized by at least 1 cm per hour cervical dilatation, once the labour has entered the *active first stage* of labour.

Another important point is that (unless you detect any maternal or fetal problems), every 30 minutes you will be counting fetal heart beats for one full minute, and uterine contractions for 10 minutes.

You should do a digital vaginal examination initially to assess:

* The extent of cervical *effacement*and cervical dilatation
* The presenting part of the fetus
* The status of the fetal membranes (intact or ruptured) and amniotic fluid
* The relative size of the mother’s pelvis to check if the brim is wide enough for the baby to pass through.

Thereafter, in every 4 hours you should check the change in:

* Cervical dilatation
* Development of cervical oedema (an initially thin cervix may become thicker if the woman starts to push too early, or if the labour is too prolonged with minimal change in cervical dilatation)
* Position
* Fetal head descent
* Development of moulding and caput
* Amniotic fluid color (if the fetal membranes have already ruptured).

You should record each of your findings on the partograph at the stated time intervals as labour, progresses. The graphs you plot will show you whether everything is going well or one or more of the measurements is a cause for concern. When you record the findings on the partograph, make sure that:

* You use one partograph form per each laboring mother. (Occasionally, you may make a diagnosis of true labour and start recording on the partograph, but then you realize later that it was actually a false labour. You may decide to send the woman home or advise her to continue her normal daily activities. When true labour is finally established, use a new partograph and not the previously started one).
* You start recording on the partograph when the labour is in active first stage (cervical dilation of 4 cm and above).
* Your recordings should be clearly visible so that anybody who knows about the partograph can understand and interpret the marks you have made.

If you have to refer the mother to a higher level health facility, you should send the partograph with your referral note and record your interpretation of the partograph in the note.

* Without looking back over the previous sections, quickly write down the partograph measurements that you must make in order to monitor the progress of labour.

### Cervical dilatation

### The first stage of labour is divided into the latent and the active phases.

### The latent phase; at the onset of labour lasts until cervical dilatation is 4 cm and is accompanied by *effacement* of the cervix. The latent phase may last up to 8 hours, although it is usually completed more quickly than this. Although regular assessments of maternal and fetal wellbeing and a record of all findings should be made, these are *not* plotted on the partograph *until* labour enters the active phase.

Vaginal examinations are carried out approximately every 4 hours from this point until the baby is born.

The active phase;  of the first stage of labour starts when the cervix is 4 cm dilated and it is completed at full dilatation, i.e. 10 cm. Progress in cervical dilatation during the active phase is at least 1 cm per hour (often quicker in multigravida mothers).

In the cervical dilatation section of the partograph, down the left side, are the numbers 0–10. Each number/square represents 1 cm dilatation. Along the bottom of this section are 24 squares, each representing 1 hour. The dilatation of the cervix is estimated by vaginal examination and recorded on the partograph with an X mark every 4 hours. Cervical dilatation in multipara women may need to be checked more frequently than every 4 hours in advanced labour, because their progress is likely to be faster than that of women who are giving birth for the first time.

**2**. Management of second and third stages of labour.

**Management of second stage of labour**

**Second stage:** 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.

***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 no advance 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.

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## Guiding principles

* As with all aspects of maternity care in accordance with a rights‐based approach, the individual needs of the woman and her companion during the second stage of labor should be taken into consideration, tailoring care to an individual's needs while offering the highest quality, evidence‐based care.
* A particularly important aspect is information and communication that prepares the woman and her labor companion for what to expect during labor and delivery.
* Special consideration is needed for culturally based birth preferences, especially where these are unusual or a minority within a particular healthcare setting. It is thought that lack of attention to humanistic care and respect for even “mainstream” cultural preferences by maternity care providers is a major barrier to the utilization of health facilities in many countries, as reflected in health surveys that show reasonable uptake of antenatal care but low rates of delivery in health facilities.
* Unfortunately, many health facilities do not allow partners or companions to remain with women during labor. While outdated hospital regulations may be a factor, this is often owing to the design of delivery rooms that lack privacy, such as screens and curtains. Service planners and managers need to address such barriers as a matter of urgency, so that all women can benefit from having someone with them throughout labor and delivery.
* As well as providing an attractive and humanistic setting, this approach has the potential to encourage greater utilization of health facilities and there is strong evidence that it reduces the need for medical interventions.

## Specific aspects of care in the second stage

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.

### *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.

### *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 labour

### *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.

### *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.

**Management of the Third stage of labour**

Third stage: from the birth of the baby until expulsion of the placenta and membranes.

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.

**What is the active management of the third stage of labour?**

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.

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 maneuver.

***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.