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# The Partograph

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A MANAGERIAL TOOL FOR THE  
PREVENTION OF PROLONGED LABOUR

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## SECTION III Facilitator's guide



The World Health Organization  
Maternal and Child Health and Family Planning Programme  
Geneva 1989



# THE PARTOGRAPH

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### ACKNOWLEDGEMENTS

This manual was prepared with the help of Dr C. Lennox. The World Health Organization would like to thank the Carnegie Corporation and the contributors to the Safe Motherhood Operations Research for their financial support.

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## INTRODUCTION

This Facilitator's Guide aims to help you teach the use of the WHO partograph. To teach its use effectively you must fully understand the principles behind it, and you must have adequate practical experience of managing labour with the WHO partograph. You must be familiar with the information in Section I of the partograph: The Principle and the Strategy (WHO/MCH/88.3) and with Section II: A User's Manual (WHO/MCH/88.4). Labour attendants learning the use of the partograph should all be issued with copies of the User's Manual and should refer to them during the course of instruction which you will lead them through.

### OBJECTIVES

You and the course participants must understand what you are trying to achieve and this must be made clear at the outset of each course. The ultimate objective is to reduce the incidence of prolonged and obstructed labour by early and timely recognition and thus reduce complications associated with these conditions. To achieve this, the application of the partograph must be fully understood and the participants must achieve the following objectives (also listed on page 3 of the User's Manual).

#### OBJECTIVES FOR PARTICIPANTS

After completing a training course, participants should be able to:

- Understand the concept of the partograph
- Record observations accurately on the partograph
- Understand the difference between the latent and the active phase of labour
- Interpret a recorded partograph and recognize any deviation from the norm
- Monitor the progress of labour, recognize the need for action at the appropriate time, and decide on timely referral
- Explain to mothers and other members of the community the significance of the partograph

It is assumed that you and the participants are experienced in looking after women in labour and this should include experience of vaginal examinations to assess cervical dilatation. Physiology in labour and basic midwifery care are not reviewed in this Guide except where they are of particular relevance to the use of the partograph. Most of what the participants will learn is **unlikely to be new knowledge**. They will, however, learn how to use knowledge and skills which they already have to look after women better in labour. Use this background among your participants to lead them from what they already know to the initially "unknown" features of the partograph.

This Facilitator's Guide is divided into several units to help you build up an overall understanding of the partograph and its use in turn. Each unit begins by summarizing your **teaching objective** and concludes with **learning objectives** to be achieved by the participants. Suggested exercises to help in the understanding of each unit are also included. Note that the User's Manual is not divided up into units and you should guide the trainees to the relevant pages as indicated within each unit.

### **AN OVERVIEW**

It is important not to lose sight of the objectives of the course and of the use of the partograph. As you work through the units, remember that the partograph is a **tool to assess and interpret the progress of labour**. Its central feature is the graphical recording of cervical dilatation, but descent of the fetal head and uterine activity are also indicators of progress in labour, and the partograph also detects other problems developing in labour in the mother and the fetus. Make sure, also, that individual care and attention for each woman in labour is emphasized. **Labour care is more than just a partograph!**

## UNIT 1

**INTRODUCING THE PARTOGRAPH****TEACHING OBJECTIVES**

- Make participants aware of the observations which are made in labour and are recorded on the partograph
- Introduce the participants to the idea of the partograph and what it is for
- Discuss screening of women before commencing a partograph

**MATERIALS REQUIRED**

1. A User's Manual for each participant
2. Blackboard and chalk or flipchart and pens

**GETTING TO KNOW EACH OTHER'S PROBLEMS**

- Find out where all your participants come from, what problems they face with labouring women and how they cope with problems of prolonged labour at present. This will allow you and the group to get to know each other and appreciate each others' situations and problems. Discuss the particular problems of long and difficult labours and the problems that result, especially ruptured uterus, post-partum haemorrhage, puerperal sepsis and vesico-vaginal fistula.

**OBSERVATIONS IN LABOUR**

- Lead the discussion round to listing all the observations they currently make on a labouring woman. List them on a blackboard as they are mentioned and divide them into a logical grouping (as page 3 of User's Manual). This will allow the group to realise that they are already doing much of what is involved in the partograph and will give them confidence to proceed. Find out how your participants presently record their observations and make sure they understand the significance of each observation.

**INTRODUCING THE PARTOGRAPH**

- You should now be ready to introduce the idea of the partograph as a means of identifying the problem of prolonged labour by recording observations in a particular way.

- Now ask your participants to read pages 2 and 3 of the User's Manual. Explain that they should not be concerned at not understanding all the objectives of the Manual at this stage.

### SCREENING FOR SPECIAL CASES

At this stage it will be useful to enlarge on the paragraph at the bottom of page 2 of the User's Manual - "Who should **not** have a partograph". Ask the participants to list particular problems which may be identified **before** labour starts or during labour and which may need special action. Examples include:

- Very short stature
- Antepartum haemorrhage
- Severe pre-eclampsia and eclampsia
- Fetal distress
- Previous Caesarean Section
- Anaemia
- Multiple pregnancy
- Malpresentation
- Very premature labour
- Obvious obstructed labour

When admitted in labour, all women must be screened for such special problems and appropriate action taken if indicated. This action will depend on the problem and on the local situation and may include transfer of the patient or immediate delivery.

- Participants should learn to ask themselves of each woman:

#### CAN THIS WOMAN BE ALLOWED TO CONTINUE IN LABOUR HERE?

- If the answer is **NO**, then appropriate action must be taken
- If the answer is **YES**, then start a partograph

A partograph can be used to monitor progress in all women unless immediate action is indicated, and the partograph can be particularly useful in labour in cases of, for example, breech presentation, multiple pregnancy, previous Caesarean section.

- Discuss briefly the management of special cases as appropriate to your local situation.

#### LEARNING OBJECTIVES OF UNIT 1

By the end of unit 1, the participant should be able to:

- State what the partograph is and what it is for
- List observations normally carried out in labour
- List special cases for whom a partograph may not be appropriate

## UNIT 2

## CERVICAL DILATATION IN LABOUR

### TEACHING OBJECTIVES

- Teach assessment of cervical dilatation in labour by vaginal examination
- Teach the difference between the active and latent phase of labour
- Teach how often to perform vaginal examination in labour

### MATERIALS REQUIRED

1. Blackboard or flipchart
2. Cervical assessment boards

This unit should be partly revision for the participants who should be familiar with the fact that the cervix dilates during labour. Some new concepts, however, are introduced, namely:

1. The difference between the LATENT and ACTIVE phases of labour
2. An understanding of the normal rate at which the cervix dilates.

The User's Manual is not needed for this unit, except for Figure 18 on the last page.

### VAGINAL EXAMINATION

As always, start with the **known** and lead on to new information. First of all, remind participants of this important rule:

**A woman who has had an ANTEPARTUM HAEMORRHAGE should NEVER have a VAGINAL EXAMINATION.**

A partograph of cervical dilatation should not be started in such cases until placenta praevia has been ruled out.

- Find out by discussion how much experience the participants have of vaginal assessment in labour.
- How frequently during labour do they perform vaginal examinations?

- What information do they get?
- How quickly do they expect the cervix to dilate?

Write information on a blackboard as you get it. This may include:

- Presentation
- Cervical dilatation
- Caput
- Palpation of cord
- Position of presenting part
- Cervical effacement (shortening)
- Moulding
- Nature of liquor

Discuss why all these things are checked for. Ask the participants what they feel is the most important of these things. (This could be done by a "secret ballot" - each participant writing his/her choice on a piece of paper which can then be collected in and votes counted. These "teaching gimmicks" help to keep a class interested).

The most important feature is the **cervical dilatation** and this is the surest way to assess **progress in labour** even though other things discovered on vaginal examination are also important.

At this stage you may have a problem with some participants having more experience than others. If they wish to discuss in more detail problems such as caput or moulding found at vaginal assessment, it is probably best to leave this discussion until later in the course and concentrate in this unit only on cervical dilatation which is the central feature of the partograph.

### **CERVICAL ASSESSMENT BOARDS**

Make sure the participants understand the concept of measuring cervical dilatation in centimetres. Construct one or several cervical assessment boards out of wood, plastic or cardboard with rings of different dilatations of 1 to 10 centimetres cut out. (See figure 18 of the User's Manual, though it is best to include all dilatations). Make sure **all** participants have or will be able to make such a board for their own use.

### **PRACTICAL EXPERIENCE**

If it is possible to arrange for each participant to undertake supervised vaginal examinations on women in labour during their course, this is, of course, ideal. Encourage them to compare their findings with a cervical assessment board to get an accurate measure of cervical dilatation.

### **LATENT AND ACTIVE PHASES OF LABOUR**

The participants will know that labour starts slowly, often with several days of "practice" contractions. Then stronger contractions take over and labour progresses quickly. Point out that this slow early labour is when the cervix is beginning to dilate up to about 3 cm. This is called the **LATENT PHASE** of labour. Contractions strong enough to cause discomfort in the latent phase of labour **should not continue for more than 8 hours**, although there may be several days before this of weak, irregular contractions.

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From 3 to 10 cm (full dilatation) labour is in the ACTIVE PHASE and should progress more rapidly, normally at **1 cm every hour**.

**LATENT PHASE = Early labour, up to 3 cm dilatation - lasts 8 hours or less**

**ACTIVE PHASE = Main part of labour, 3-10 cm dilatation at 1 cm/hour or faster**

The participants must understand that the active phase of labour may appear harder work to the woman because her contractions are stronger but as far as **progress** is concerned, things become quicker and more efficient as the cervix dilates more quickly.

Point out that the partograph is going to teach them how to identify those women in whom the latent phase of labour is lasting too long or the active phase of labour is progressing too slowly.

#### **OTHER FEATURES OF THE LATENT PHASE**

During the latent phase of labour, the cervix usually not only dilates up to 3 cm, but also shortens (effaces). Many participants will be aware of this and this will need to be discussed. In the primigravida, the cervix will generally be fully effaced by the time 3 cm dilatation is reached, but in the multigravida it may not be. In such cases, however, once 3 cm dilatation is reached and presuming the woman is contracting and in labour, labour is now considered to be in the active phase.

For the purposes of the WHO partograph, it has been decided that dilatation alone will determine the change from the latent to the active phase of labour.

- Point out also that most women present in labour past the latent phase and well into the active phase of labour, i.e. at more than 3 cm cervical dilatation.

#### **FREQUENCY OF VAGINAL EXAMINATIONS**

You have already learned from the participants (above) how frequently they perform vaginal examinations in labour. Ask how often they think they should be performed to learn how well labour is progressing bearing in mind what they have now learned.

Lead them to agree that 4-hourly examinations are the correct time interval.

- Do they understand the problem with **more** frequent examinations?
  - discomfort for the mother
  - danger of introducing infection
- And the problem with **less** frequent examinations?
  - delay in diagnosis of slow progress in labour

### LEARNING OBJECTIVES OF UNIT 2

By the end of Unit 2, the participant should:

1. Understand how to assess cervical dilatation in labour using a cervical assessment board and, if possible, have had some supervised practical experience of this.
2. Understand the difference between the active and latent phase of labour and how quickly each should progress.
3. Know how often vaginal examinations should be performed in labour and why.

## UNIT 3

## PLOTTING CERVICAL DILATATION ON A GRAPH

## TEACHING OBJECTIVES

Teach how graphs can record changes against time

Teach how to plot cervical dilatation against time on a graph

## MATERIALS REQUIRED

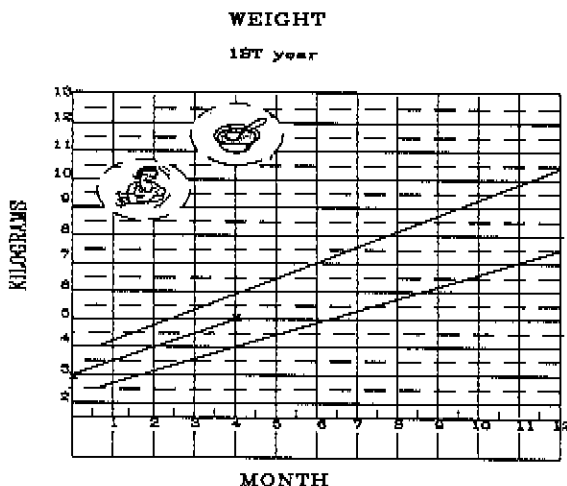
1. Child growth charts, one for each participant
2. Graph paper
3. Pencils and rubbers

In this unit, participants are introduced to the concept of recording cervical dilatation on a graph. They must be able to do this accurately or they cannot use the partograph.

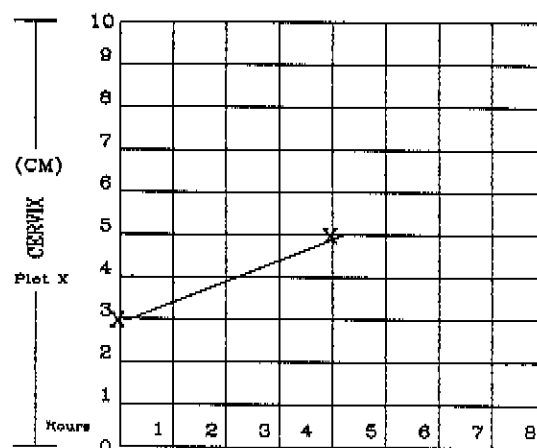
Graphs are a way of recording the changing position or size of something over a period of time.

Most participants will already be familiar with using child growth charts. Plotting cervical dilatation is very similar.

A CHILD GAINS WEIGHT  
OVER TIME



THE CERVIX DILATES  
OVER TIME



## EXERCISES

If participants are familiar with this, practice plotting a child's weight for age on the growth chart graph.

Try to obtain at least one blank child growth chart and a pencil and rubber for each participant. Read out the exercises at the end of this unit and check that participants are plotting the weight for age correctly.

Point out again that **weight** (kg) is on the vertical axis and is changing over a period of **time** (months) on the horizontal axis.

Now participants should practice plotting cervical dilatation against time on a graph (**not** on the partograph itself, which is too complicated at this stage).

If each participant has one sheet of graph paper (if necessary they can make it up by drawing lines) and a pencil and rubber, several examples can be plotted on the same paper.

First they should mark hours along the bottom (horizontal) axis and the centimetres along the vertical axis.

Read out the examples given at the end of this unit and make sure they are plotted correctly. Also plot then on a blackboard graph yourself.

## LOOK AT THE GRAPHS

The participants should look at the pattern of each graph after they have drawn it. The exercises have been designed to show the pattern of typical normal labour. This should help their understanding of the next Unit which joins together what participants have learned.

Make sure participants can also see that one box on the graph represents one centimetre of dilatation upwards and one hour of time along the bottom.

Seeing these two things will help their understanding of the next unit which joins together what participants have learned from this Unit and the preceding one.

### LEARNING OBJECTIVES

By the end of Unit 3, participants should:

1. Understand how a graph records something changing over time.
2. Be able to plot cervical dilatation against time on a graph.

## SAMPLE EXERCISES FOR UNIT 3

### PLOTTING EXERCISES FOR CHILD'S WEIGHT FOR AGE

Call out these exercises or enter them on the blackboard and ask participants to plot them on a child's weight for age graph.

- |                    |         |             |         |
|--------------------|---------|-------------|---------|
| 1. Weight at birth | 3.0 kg  | 2. At birth | 3.0 kg  |
| At 1 month         | 3.5 kg  | 4 months    | 5.0 kg  |
| 2 months           | 4.0 kg  | 6 months    | 6.0 kg  |
| 3 months           | 4.5 kg  | 12 months   | 10.5 kg |
| 4 months           | 5.0 kg  |             |         |
| 3. At birth        | 4.0 kg  |             |         |
| 3 months           | 6.0 kg  |             |         |
| 9 months           | 8.5 kg  |             |         |
| 12 months          | 10.0 kg |             |         |

Other examples can be made up.

### PLOTTING EXERCISES FOR CERVICAL DILATATION

Call out these cervical dilatations for different time and ask participants to plot them on a graph with centimetres marked on the vertical axis and hours on the horizontal axis. Cervical dilatation is assessed every four hours.

- |                                      |                     |
|--------------------------------------|---------------------|
| 1. On admission, cervix 2 cm dilated | 2. Admission - 1 cm |
| After 4 hours, 4 cm dilated          | 4 hours - 2 cm      |
| After 8 hours, 8 cm dilated          | 8 hours - 4 cm      |
|                                      | 12 hours - 9 cm     |
| 3. Admission - 5 cm                  | 4. Admission - 3 cm |
| 4 hours - 10 cm                      | 4 hours - 7 cm      |
| 5. Admission - 1 cm                  |                     |
| 4 hours - 2 cm                       |                     |
| 8 hours - 3 cm                       |                     |
| 12 hours - 8 cm                      |                     |

Other examples can be made up, but at this stage, try to make sure that they will make a curve on the graph which shows the rate of **normal labour**, as all the above examples do.

## CERVICAL DILATATION AND THE PARTOGRAPH

### TEACHING OBJECTIVES

- Revise and combine knowledge learned in Units 2 and 3.
- Teach plotting of cervical dilatation on the partograph.
- Teach recognition of the normal pattern of latent and active phases of labour on the partograph.

### MATERIALS REQUIRED

1. Blackboard, overhead projector or flannelgraph
2. Centre part of partograph with marked latent phase and alert line
3. Partographs
4. Pencils and rubbers

By now, the participants should have a firm grasp of the phases of labour, and how to record cervical dilatation on a graph. They can now apply this knowledge to the partograph.

### UNDERSTANDING THE PARTOGRAPH

A copy of the central part of the partograph should be drawn onto a blackboard or an overhead projector or a flannelgraph to help you to teach this unit.

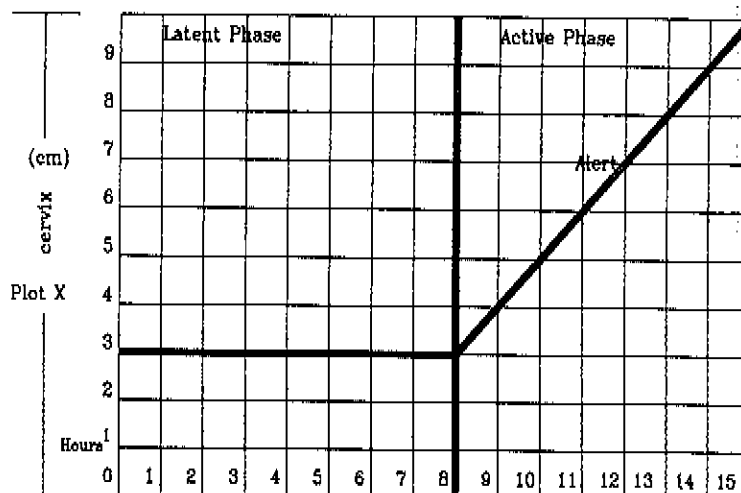
Remind the participants of what they learned in the previous units.

- The latent phase lasts up to 8 hours
- In the active phase, the cervix should dilate at 1 cm/hour or faster
- Look at the shape of the graphs they drew as exercises in the last unit
- Each box on a graph like the partograph means 1 cm up and 1 hour along.

Now build up your partograph on the blackboard. At this stage, do not draw in the action line, so it should look like this:

Show how the heavy black lines emphasise all four of the above points. The name of the alert line is unimportant at this stage, but show how it moves at 1cm/hour, joining the corners of the boxes.

Take time to make sure participants understand these features before moving on to plotting cervical dilatation, but they may find understanding easier as they work through this unit practising plotting dilatation on the partograph.



The participants should now read and study pages 4 and 5 of the User's Manual, paying particular attention to the central part of the partograph where cervical dilatation is recorded graphically. They should ignore the action line and other features of the partograph at present.

### CHARTING CERVICAL DILATATION ON ADMISSION

Teach participants to plot cervical dilatation on admission in the correct place by doing things in the following order:

1. Do vaginal examination and note cervical dilatation.
2. Decide if labour is in the **LATENT PHASE** (cervical dilatation 0, 1, or 2 cm) or in the **ACTIVE PHASE** (cervical dilatation 3 or more cm).
3. Put a cross to mark cervical dilatation on the right place on the partograph.
  - If the cervix is in the latent phase (less than 3 cm), place the cross at the left hand end of the graph (0 hours).
  - If the cervix is in the active phase (more than 3 cm), place the cross **on the alert line** at the correct number of cm dilatation (3 to 10 cm).

Use your blackboard or flannelgraph partograph to demonstrate this several times.

4. Note the time of the vaginal examination and record that in the "Time" box to the nearest hour or half hour under the cross that has just been placed.

Point out that other routine recordings will be made on the partograph at the same time but that initially you will concentrate on plotting cervical dilatation.

## **EXERCISES**

If possible, issue each participant with several blank partographs or at least one each with a pencil and rubber. Call out several different cervical dilatations and ensure that each trainee is plotting this initial cervical dilatation correctly on their partograph. Do not discuss the plotting of subsequent cervical dilatations until all the participants are competently plotting the initial one in the correct place.

## **CHARTING SUBSEQUENT CERVICAL DILATATIONS**

Teach the participants the following rules:

1. Perform vaginal examinations to assess cervical dilatation every 4 hours.
2. Mark with an arrow on the partograph the time of the next examination. (This should not normally be necessary once participants are familiar with using the partograph in practice).
3. Plot this cervical dilatation on the partograph.

Labours that are already in the active phase on admission or are remaining in the latent phase should be easy to plot, but illustrate this several times with your blackboard/flannelgraph partograph.

### **Examples**

In addition to your own examples, the participants should study those on pages 6 and 7 of the User's Guide.

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## EXERCISES

Call out 2 separate cervical dilatations 4 hours apart and ask the participants to record them on their partographs. Ensure that the dilatations you call out are both in the latent phase (0 - 2 cm) or both in the active phase (3 - 10 cm). Ensure also that the dilatations you call out in the active phase will keep to the left of the alert line (i.e. at least 4 cm progress in 4 hours).

## TRANSFER FROM LATENT TO ACTIVE PHASE

By now, the participants should be wondering how to record a labour which moves from the latent to the active phase in less than 8 hours, and must be taught about this transfer.

At the first vaginal examination which shows that labour is in the active phase, cervical dilatation must be plotted on the alert line.

In practice, this means trainees must learn the following rule:

**The first time that the cervix is 3 or more cm dilated, plot this on the alert line.**

Ask them to study the example on page 8 of the User's Guide and discuss together what has happened.

Make sure they understand the following steps:

1. On admission, labour was in the latent phase
2. 4 hours later, labour was in the active phase and after plotting this cervical dilatation it was immediately transferred onto the alert line where active labour should be recorded.
3. The time (6 pm) was transferred to be under the correct place.
4. Point out that all other recordings will also be transferred to the new position on the partograph.

## EXERCISES

The participants must now carry out several exercises to ensure they have a firm grasp of the technique of recording cervical dilatation.

Some examples are given at the end of this unit. If you make up other examples, ensure that they illustrate **normal labour**, i.e. a latent phase of less than 8 hours and an active phase which progresses at the rate of at least 1 cm/hour and thus keeps on or to the left of the alert line. These exercises can be **reversed** i.e. you can make up several partographs illustrating normal labour, and ask the participants to write down or tell you what the graphs tell them, i.e.

1. What time was vaginal examination carried out?
2. What was the cervical dilatation at different times?
3. What phase is labour in?

## NORMAL LABOUR

Emphasize to the participants that they have been recording normal labour with latent phases less than 8 hours and active phases progressing at 1 cm/hour or faster.

Therefore crosses in the latent phase should not normally pass beyond the heavy line at 8 hours on the partograph and crosses in the active phase should not normally move to the right of the heavy alert line.

These points are emphasized on page 9 of the User's Guide and the participants should read and learn these "Points to Remember":

### LEARNING OBJECTIVES

By the end of Unit 4, the participant should:

1. Know the normal pattern of the latent and active phases of labour.
2. Be able to accurately record the progress of cervical dilatation in normal labour on the partograph.

---

## SAMPLE EXERCISES FOR UNIT 4

Record the following findings correctly on a separate partograph for each case.

1. Admitted 4 pm, cervical dilatation 1 cm.  
At 8 pm, cervical dilatation 2 cm.
2. Admitted 9 am, cervical dilatation 5 cm.  
At 1 pm, cervical dilatation 9 cm.
3. Admitted 2 am, cervical dilatation 1 cm.  
At 6 am, cervical dilatation 2 cm.  
At 10 am, cervical dilatation 3 cm.  
At 2 pm, cervical dilatation 8 cm.
4. Admitted 5 am, cervical dilatation 3 cm.  
At 9 am, cervical dilatation 9 cm.
5. Admitted 6 pm, cervical dilatation 2 cm.  
At 10 pm, cervical dilatation 5 cm.  
At 2 am, cervical dilatation 10 cm.
6. Admitted 1 am, cervical dilatation 1 cm.  
At 5 am, cervical dilatation 2 cm.  
At 9 am, cervical dilatation 8 cm.
7. Admitted 4 pm, cervical dilatation 2cm.  
At 8 pm, cervical dilatation 2 cm.  
At 12 pm, cervical dilatation 3 cm.  
At 4 am, cervical dilatation 7 cm.
8. Admitted 10 pm, cervical dilatation 1 cm.  
At 2 am, cervical dilatation 10 cm.

## OTHER SIGNS OF PROGRESS IN LABOUR

### TEACHING OBJECTIVES

- Describe abdominal palpation for level of fetal head and teach how to plot this on the partograph.
- Teach recording and plotting of uterine contractions.
- Revise all aspects of recording progress of labour on the partograph.

### MATERIALS REQUIRED

1. Pelvis and doll or fetal skull
2. Partographs
3. Pencils and rubbers
4. Paper with boxes drawn in
5. Blackboard

### PROGRESS IN LABOUR

Although cervical dilatation is the most important sign of progress in labour and recording of this forms the central part of the partograph, other important signs are:

1. Descent of the fetal head
2. Uterine contractions

These are comprehensively described on pages 9-14 of the User's Guide but participants should not read these pages until later on in this unit.

### DISCUSSION SESSION

Before teaching about these or asking the participants to read these pages, ask the participants for their own ideas about assessment of progress apart from cervical dilatation and discuss their replies. Lead the discussion round to the 2 features you are about to explore with them.

### DESCENT OF THE FETAL HEAD

Some participants may be familiar with the concept of assessing the level of the head by the number of fifths palpable abdominally. Even if they are, revise this with them, and they will need teaching about recording the level of the head on the partograph.

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- In some populations, the head does not descend into the pelvis until late in labour and your teaching must take this into account in your local situation.
  - Remind participants that the bladder must be empty when the level of the fetal head is assessed.

### **PRACTICAL TEACHING**

- a) Try to obtain a model of a pelvis and a fetus to demonstrate more fully the illustrations on page 10 of the User's Guide, which participants should study.
- b) Try to arrange attendance at an antenatal clinic where the participants can practice palpating the level of the head abdominally in women with advanced pregnancy. Use fingers to measure the number of fifths.

### **RECORDING HEAD DESCENT ON THE PARTOGRAPH**

This is illustrated on page 11 of the User's Guide.

Teach participants the following guidelines:

1. Assess the level of the fetal head abdominally before every vaginal examination (normally every 4 hours).
2. Note the number of fifths that can be felt above the pelvis, i.e. the number of "fingers" of head that can be felt. This number measures the level of the head.
3. Record the level by an 'O' on the partograph. This means that every time they mark an 'X' for cervical dilatation, they must also mark an 'O' for level of fetal head.
4. If the 'X' is transferred to the alert line when labour enters the active phase, the 'O' should also be transferred.
5. The head should normally descend during labour so that you can feel less and less of it abdominally. This means that as the 'X' recording cervical dilatation rises up the graph, the 'O' recording fetal head level should drop down the graph. The 'O' should never go up the graph - this does not happen in labour.

Figure 8 on page 11 of the User's Guide illustrates all these points.

## EXERCISES

- a) If possible, ask participants to palpate pregnant women's abdomens and state the level of the head in fifths.
- b) Ask the participants to record various levels of head on their blank partographs. Call out numbers representing cervical dilatation and head descent level and ask trainees to mark both on the same partograph.

## UTERINE CONTRACTIONS

Ask the participants how they assess uterine contractions at present and how they record their finds. Many will suggest assessing the **strength** of contractions. Point out that this is very difficult to assess as different health workers and different mothers may feel differently about a contraction which is actually of the same strength. It is best to record features which can be measured accurately using a watch, i.e.

- How often do the contractions come? (frequency)  
and
- How long do they last? (duration)

If the attendants in labour change, the recordings continue to be made in the same way and are comparable.

Pages 12-13 of the User's Guide describe these features and how to record them on the partograph. Ask your participants to read these pages.

## RECORDING CONTRACTIONS ON THE PARTOGRAPH

Teach the following guidelines:

1. Uterine contractions are measured and recorded on the partograph more often than cervical dilatation or level of fetal head - hourly in the latent phase and half-hourly in the active phase of labour.
2. Assess contractions in the last 10 minutes of each half hour or hour.
3. Count **all** the contractions in that 10 minutes and measure in seconds how long each one lasts. (frequency and duration)
4. Fill in one box at the right time on the partograph for each contraction counted (up to 5 - there are only 5 boxes!)
5. The longer the contractions last the more heavily the box is filled in.

## EXERCISES

Rather than wasting several more blank partographs, prepare several sheets of paper with boxes to record contractions for the participants to fill in.

Or use the blackboard and have participants fill in boxes on the blackboard.

Call out figures for the number of contractions in 10 minutes and how long each contraction lasted. Ask participants to fill in boxes accordingly.

Reverse the exercises by filling in boxes on the blackboard and asking participants to interpret what they mean.

Figure 10 on page 14 of the User's Guide illustrates how recording contractions fits in with other recordings and participants should now study this.

## REVISION

Participants have now learnt to record all observations on the progress of normal labour on the partograph and this is a good time to revise this. This is best done by setting the participants exercises to fill in partographs or to interpret recordings on a partograph. Examples of questions that can be set are given at the end of this unit. The questions can be reversed if you fill in a partograph with the information given in these exercises. Show it to the participants and ask them to interpret it.

### LEARNING OBJECTIVES

By the end of Unit 5, participants should:

1. Be able to assess the progress of normal labour by measuring cervical dilatation, descent of fetal head and uterine contractions.
2. Know how often to make these assessments.
3. Be able to record their findings accurately on a partograph.
4. Understand the difference between the latent and active phases of labour.

## SAMPLE EXERCISES FOR UNIT 5

In each of the following cases, fill in information on a partograph and answer these questions each time.

- How long is it since the woman was admitted in labour?
- What phase of labour is she in?
- What is the latest time you would expect her to be fully dilated?
- When should the next vaginal examination for cervical assessment be carried out?
- When should the level of the fetal head next be assessed?
- How often should contraction frequency and duration be recorded?

Fill in a **likely contraction pattern** between assessments where there is more than one.

**Case 1:** Mrs A, admitted 4 am.  
 Level of head 3/5  
 Cervical dilatation 5 cm  
 Contractions 3 in 10, lasting 50 seconds.

**Case 2:** Mrs B, admitted 8 pm  
 Level of head 4/5  
 Cervical dilatation 2 cm  
 Contractions 2 in 10, lasting 15 seconds

**Case 3:** Mrs C, admitted 10 am  
 Level of head 5/5  
 Cervical dilatation 1 cm  
 Contractions 1 in 10, lasting 10 seconds

At 12 midnight  
 Level of head 2/5  
 Cervical dilatation 3 cm  
 Contractions 4 in 10, lasting 45 seconds

At 2 pm  
 Level of head 4/5  
 Cervical dilatation 2 cm  
 Contractions 2 in 10, lasting 30 seconds

**Case 4:** Mrs D, admitted 9 pm  
 Level of head 5/5  
 Cervical dilatation 6 cm  
 Contractions 3 in 10, lasting 30 seconds

At 6 pm  
 Level of head 3/5  
 Cervical dilatation 4 cm  
 Contractions 3 in 10, lasting 35 seconds

At 1 am  
 Level of head 0/5  
 Cervical dilatation 10 cm  
 Contractions 4 in 10, lasting 55 seconds

At 10 pm  
 Level of head 0/5  
 Cervical dilatation 9 cm  
 Contractions 5 in 10, lasting 50 seconds

Other similar examples can be made up.

## UNIT 6

**FETAL AND MATERNAL CONDITION****TEACHING OBJECTIVES**

- Discuss observations of maternal and fetal condition
- Teach how these are recorded on the partograph
- Revise all aspects of recording normal labour on the partograph

**MATERIALS REQUIRED**

1. Partographs
2. Fetal skull and pelvis
3. Blackboard or flipchart

The partograph's main role is to help in the early recognition of prolonged labour but it is also a concise and complete tool for recording all routine observations in labour. It saves on paper and on time, and makes it easy to rapidly review the total pattern of labour.

During Unit 6, you should teach the participants how to record observations on the fetal and maternal condition during labour. Most of the information should be revision but they must learn where and how to record it on the partograph.

**FETAL CONDITION** (pages 15-16 of User's guide)

Discuss with the participants how they assess the fetal condition in labour, how often they carry out observations and how they record their findings at present. Write down the main results of your discussion on the blackboard. These should include:

- Fetal heart rate
- State of liquor
- Moulding of fetal skull bones

Discuss why each is important. All trainees should be familiar with the first two. Some may not know about moulding.

To teach about moulding, try to obtain a model of a fetal skull and examine the head of a newborn baby. Show how the bones are separate and can move closer together in labour as the head squeezes through the pelvis.

Make sure participants understand the difference between caput and moulding though each may be a sign of difficult prolonged labour with possible disproportion. It is usually impossible to assess the degree of moulding until the cervix is at least 4 cm dilated.

Some participants may be unsure of their ability to assess moulding. Reassure them about this. It sometimes is difficult, even for experts, and as long as they are able to assess cervical dilatation accurately, they will still be able to detect an abnormal labour using the partograph.

Participants should read pages 15 and 16 of the User's Guide. Discuss any problems they have over these pages.

## RECORDING FETAL CONDITION ON THE PARTOGRAPH

Point out that the fetal condition is recorded on the top part of the partograph.

**Fetal heart:** Record 1/2 hourly. If the participants have fully grasped how to record cervical dilatation on a graph they should have no difficulty with recording the fetal heart. If necessary, revise unit 3 which describes recording events on graphs.

**Liquor:** Record at least 4 hourly at the time of vaginal examination but at any time if the liquor changes (eg. becomes meconium stained). Note the abbreviations on page 15 of the User's Guide

**Moulding:** Note and record at each vaginal examination. Abbreviations on page 16 of the User's Guide.

Make sure all participants are able to record the fetal condition accurately on the partograph.

REMINDE THEM THAT WHEN LABOUR TRANSFERS FROM THE  
LATENT TO THE ACTIVE PHASE  
ALL RECORDINGS MUST BE TRANSFERRED AT THE SAME TIME

Figure 11 on page 17 of the User's Guide illustrates this.

## MANAGEMENT OF FETAL DISTRESS

Trainees will raise questions at this stage about what to do when any of the observations on fetal condition are abnormal. Take the opportunity to discuss this with them. Action will vary depending on the local situation but possible actions can be summarised as:

Observation or  
Transfer or  
Deliver

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### **ARTIFICIAL RUPTURE OF MEMBRANES (ARM)**

As liquor is discussed, questions are also likely to be asked about artificial rupture of membranes (ARM) in labour. This is not discussed in the User's Guide. Advice and guidelines differ from place to place, so no specific guidance is given here. In general, you should teach the local policy. In most situations this will mean performing ARM when labour is in the active phase but variations are more likely concerning the place of ARM in the latent phase.

### **MATERNAL CONDITION**

Before reading about this in the User's Guide (page 16), ask the trainees what observations they make on women in labour and how they record them. List them on the blackboard.

Discuss why these observations are made and what the normal ranges are. Trainees should now read page 16 to revise these observations.

### **RECORDING MATERNAL CONDITION ON THE PARTOGRAPH**

Demonstrate that maternal observations are made on the bottom part of the partograph. Point out that you have now covered and discussed every part of the partograph (except the action line) and what may at first have appeared confusing and difficult should now be much more clear and simple to follow.

### **DRUGS, INTRAVENOUS FLUIDS AND OXYTOCIN**

Many participants may not have access to these but where they are used, demonstrate where their use should be recorded on the partograph. Apart from analgesics, no drugs or oxytocin or I.V. fluids are likely to be needed in normal labour. Oxytocin and its usage is discussed further in Unit 7.

## EXERCISES

1. Ask participants to list all observations on the fetal and maternal condition and how often they should be recorded.
2. Make sure participants can record observations correctly on the partograph by calling out various recordings of, for example, fetal heart rate, condition of liquor, blood pressure, and checking that they are correctly recorded.
3. Gradually construct a completed partograph on your blackboard or flannelgraph by calling out observations and asking the participants to come and record them in turn. This kind of exercise is usually enjoyable and helps highlight problem areas.
4. Find labour records which have not used a partograph and see if participants can construct a partograph from them. This is often difficult but can help a lot in understanding the partograph and will demonstrate how well the partograph gives a clear, concise picture of labour.
5. Where possible, have participants observe women in labour and record findings on a partograph. They should now be able to fully complete a partograph. At this stage, try to choose women likely to have normal labours!

### LEARNING OBJECTIVES OF UNIT 6

By the end of Unit 6 the trainees should:

1. Know what observations are made to assess fetal and maternal condition labour.
2. Be able to record fetal and maternal condition accurately on the partograph.
3. Recognize abnormal recordings of fetal and maternal condition and be able to discuss action depending on the local situation.
4. Be able to make all recordings and complete a partograph for a woman in normal labour.

## UNIT 7

**RECOGNIZING ABNORMAL LABOUR****TEACHING OBJECTIVES**

- Teach the recognition of prolonged labour using the alert and action lines.
- Discuss other problems in labour.
- Discuss management options for problems in labour.

**MATERIALS REQUIRED**

1. Blackboard
2. Partographs
3. Pencils and rubbers

The participants should now be competent at making all observations on the partograph and should be fully aware of the partograph pattern of normal labour.

This unit teaches the recognition of abnormally slow labour using the partograph and suggests possible actions at different stages. Other problems in labour are then discussed briefly.

**PROLONGED LABOUR****REVISE UNIT 2**

Remind participants of these important facts:

- The latent phase of labour should last no longer than 8 hours
- In the active phase of labour the cervix should dilate at 1 cm per hour or faster.

On the partograph this means that the heavy black line after 8 hours of latent phase should not be crossed and, in the active phase, dilatation should not move to the right of the heavy alert line.

**PROLONGED LATENT PHASE**

The participants should read and study page 19 of the User's Manual.

If labour has not reached the active phase after 8 hours of observation the latent phase is prolonged.

A decision must be made about further management. This decision will depend on the local situation but normally, possible actions are as follows:

- In a peripheral unit - transfer to a central unit
- In a central unit - continue to observe

OR

**rupture membranes and augment labour**

Discuss these actions as seem appropriate to your local situation with the participants.

### **PROLONGED ACTIVE PHASE**

When cervical dilatation crosses to the right of the **alert line**, this is a warning that labour is slow and there may be problems.

At this stage draw in the action line on the partograph. Show how the action line starts 4 hours to the right of the alert line and moves at 1 cm/hour, joining the corners of the boxes.

If cervical dilatation continues to progress slowly and reaches the **action line** on the partograph, labour is dangerously slow, and a decision about definite action must be taken.

Teach participants:

**Moving to the right of the alert line - WARNING - transfer woman from peripheral unit (health centre) to central unit (hospital)**

**Reaching the action Line - POSSIBLE DANGER - decision must be made as to further management (usually by obstetrician or medical officer)**

Participants should now read and study pages 20-22 of the User's Manual.

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## EXERCISES

Participants should complete partographs demonstrating prolonged labour. Examples (plotting cervical dilatation only) are given at the end of this unit. As before, the exercises can be reversed asking participants to interpret completed partographs.

The participant should now also be ready to complete the exercises at the end of the User's Manual.

## MANAGEMENT OF ABNORMAL PROGRESS IN LABOUR

The primary purpose of the WHO partograph is to recognize slow progress in labour at an early stage. It does not give specific management guidelines, other than recommending transfer to a central unit when the latent phase is longer than 8 hours or the active phase moves to the right of the alert line.

Local situations and facilities vary tremendously and each area must devise its own management plans. Suggestions are, however, made on pages 23 and 24 of the User's Manual. Participants should read these pages.

Discuss with them what options are appropriate in their local situation. Depending on the level of your participants certain aspects of management may be discussed in detail.

## OTHER PROBLEMS IN LABOUR

The partograph is particularly designed to recognize prolonged labour, but other problems may, of course, develop during labour which is progressing normally. Discuss what these problems during labour can be. Invite the participants' suggestions, and draw up a list on the blackboard or ask the trainees to write their own list and then discuss all of their answers. Possible problems which should be included are:

1. Rising blood pressure
2. Passing no urine or marked proteinuria
3. Bleeding
4. Fetal distress
5. Pyrexia
6. Tachycardia and ketonuria
7. Persisting high head
8. Diagnosis of twins or malpresentation

All except the last of these can be diagnosed from recordings on the partograph. Point this out to the participants. It is also important to point out that **obstructed labour** may occur, even if labour is not prolonged. Watch especially for a head which remains high.

Discuss briefly what management each of these problem requires. This will largely depend on the local situation. In general, however, if any of these problems develop in a peripheral unit without full obstetric facilities, transfer to a central unit is indicated if possible.

### LEARNING OBJECTIVES

By the end of Unit 7, participants should:

1. Understand and be able to complete all parts of the partograph.
2. Describe all abnormalities in labour.
3. Know how to recognize prolonged labour on the partograph.
4. Know when to transfer a woman in labour from a peripheral to a central unit.
5. Have some knowledge of possible management options in prolonged labour.

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## SAMPLE EXERCISES FOR UNIT 7

Examples are given of cervical dilatations in prolonged labour. After plotting each dilatation, participants should decide which of these options should now be carried out.

1. Wait 4 hours and perform next vaginal examination
2. Transfer to central unit
3. Decide further management based on careful assessment

**Case A:**

Admitted 8 am, cervix 4 cm

At 12 midday, cervix 6 cm

At 4 pm, cervix 7 cm

**Case B:**

Admitted 2 pm, cervix 1 cm

At 6 pm, cervix 2 cm

At 10 pm, cervix 2 cm

**Case C:**

Admitted 10 pm, cervix 4 cm

At 2 am, cervix 8 cm

At 6 am, cervix 9 cm

**Case D:**

Admitted 5 am, cervix 2 cm

At 9 am, cervix 3 cm

At 1 pm, cervix 5 cm

At 5 pm, cervix 7 cm

**Case E:**

Admitted 3 am, cervix 1 cm

At 7 am, cervix 5 cm

At 11 am, cervix 9 cm

At 1 pm, still undelivered