

PARTOGRAPH

1

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ASSISTANT PROFESSOR
MIMSCON

Partograph

2

- A partograph is a graphical record of the observations made of a woman in labour
- It was developed and extensively tested by the world health organization WHO



Midwives are trained in using simple tools for monitoring labour and births.

WHO PARTOGRAPH

The WHO partograph begins only in the active phase of labor, when the cervix is **4 cm** or more dilated

PARTOGRAPH FUNCTION

4

Partograph has a different level of function at different levels of health care

Health center

- To give early warning if labour is likely to be prolonged and to indicate that the woman should be transferred to hospital.

Hospital: for extra vigilance and early intervention

COMPONENTS OF THE PARTOGRAPH

5

- Part 1**
Baseline data of the mother
- Part 2**
Fetal condition
- Part 3**
Progress of labour
- Part 4**
Maternal condition

ANNEX 2: Partograph

Name	Gravida	Para.	Hospital no.																																																																																																																																																														
Date of admission	Time of admission	Ruptured membranes	hours																																																																																																																																																														
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Source: WHO, used by permission

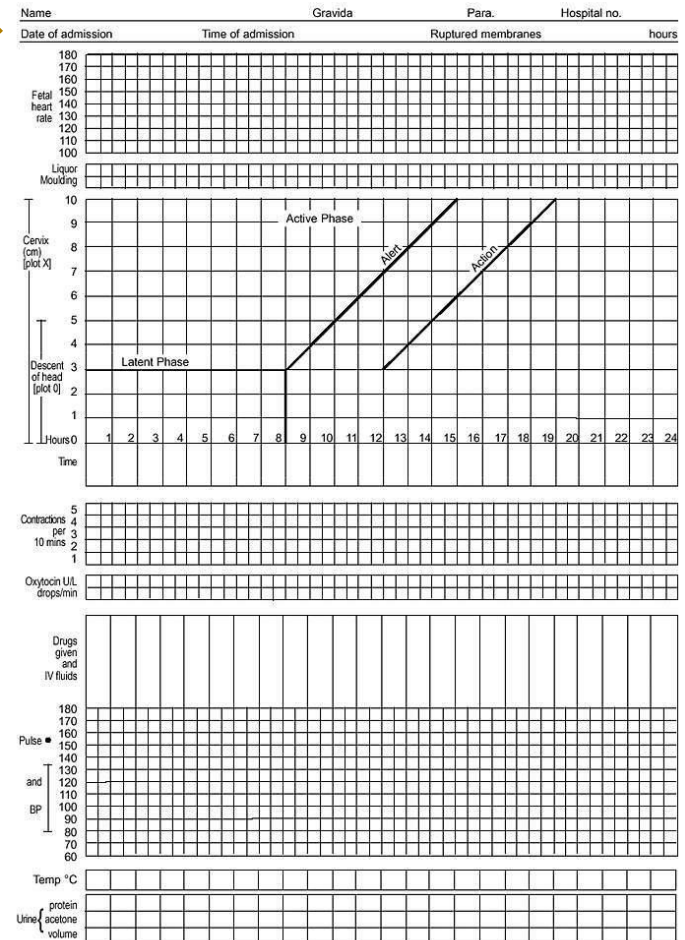
Part 1 : Baseline data of the mother

6

- Name
- Gravida
- Para
- Hospital number
- Date and time of admission
- Rupture of membrane in hours



ANNEX 2: Partograph



Source: WHO, used by permission

Part 2: Fetal condition

7

1. Fetal heart rate
2. Amniotic fluid
3. Moulding of the fetal head

ANNEX 2: Partograph

Name	Gravida	Para.	Hospital no.
Date of admission	Time of admission	Ruptured membranes	hours

Fetal heart rate	[Grid for fetal heart rate from 100 to 180 bpm]																							
Liquor Moulding	[Grid for liquor moulding]																							
Cervix (cm) [plot X]	[Grid for cervical dilation from 1 to 10 cm]																							
Descent of head [plot O]	[Grid for descent of head from 1 to 9 cm]																							
Time	[Time axis from 0 to 24 hours]																							
Contractions per 10 mins	[Grid for contraction frequency from 1 to 5]																							
Oxytocin U/L drops/min	[Grid for oxytocin dosage]																							
Drugs given and IV fluids	[Grid for drug and fluid administration]																							
Pulse	[Grid for pulse rate from 60 to 180]																							
BP	[Grid for blood pressure from 60 to 180]																							
Temp °C	[Grid for temperature from 60 to 180]																							
Urine protein	[Grid for urine protein]																							
Urine acetone	[Grid for urine acetone]																							
Urine volume	[Grid for urine volume]																							

Source: WHO, used by permission

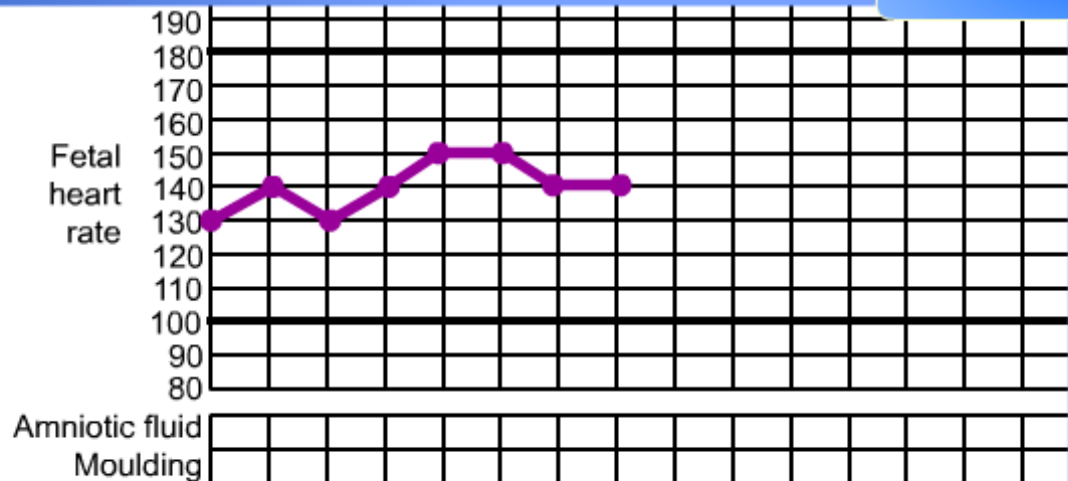
FETAL HEART RATE

8

- Monitored and recorded every 30 minutes
- Tachycardia > 160 beats/min
- Bradycardia < 110 beats/min
- Normal 110-160 beats/min

Zalika

Time	Fetal heart rate
02:00	130 bpm
02:30	140 bpm
03:00	130 bpm
03:30	140 bpm
04:00	150 bpm
04:30	150 bpm
05:00	140 bpm
05:30	140 bpm

Exercise 1. Fetal heart rate recording

0									
Hours	1	2	3	4					
Time	2:00	3:00	4:00	5:00					

MEMBRANE AND LIQUOR

10

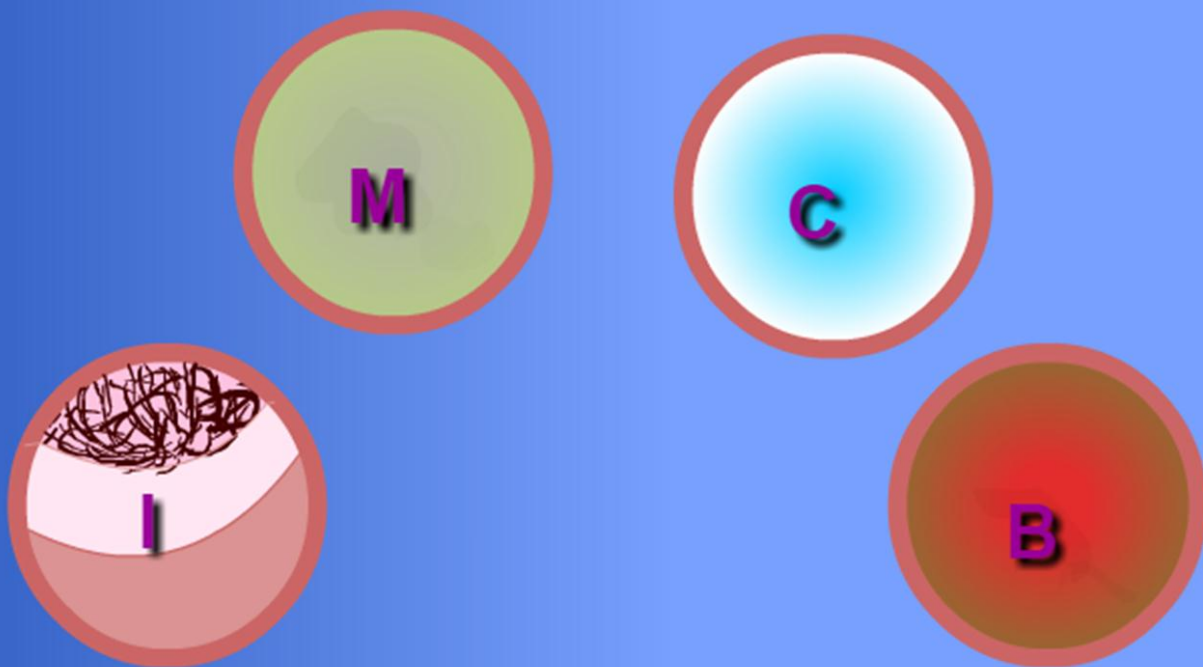
- I Intact membranes
- C Ruptured membranes + clear liquor
- M Ruptured membranes + meconium- stained liquor
- B Ruptured membranes + blood – stained liquor
- A Ruptured membranes + absent liquor

**Intact
membranes**

Clean

**Meconium-
stained**

**Blood-
stained**



MOULDING THE FETAL SKULL BONES

12

- Molding is an important indication of how adequately the pelvis can accommodate the fetal head
- increasing molding with the head high in the pelvis is an ominous sign of cephalopelvic disproportion

MOULDING OF THE FETAL SKULL BONES

13

0

- Separated bones, sutures felt easily

+

- Bones just touching each other

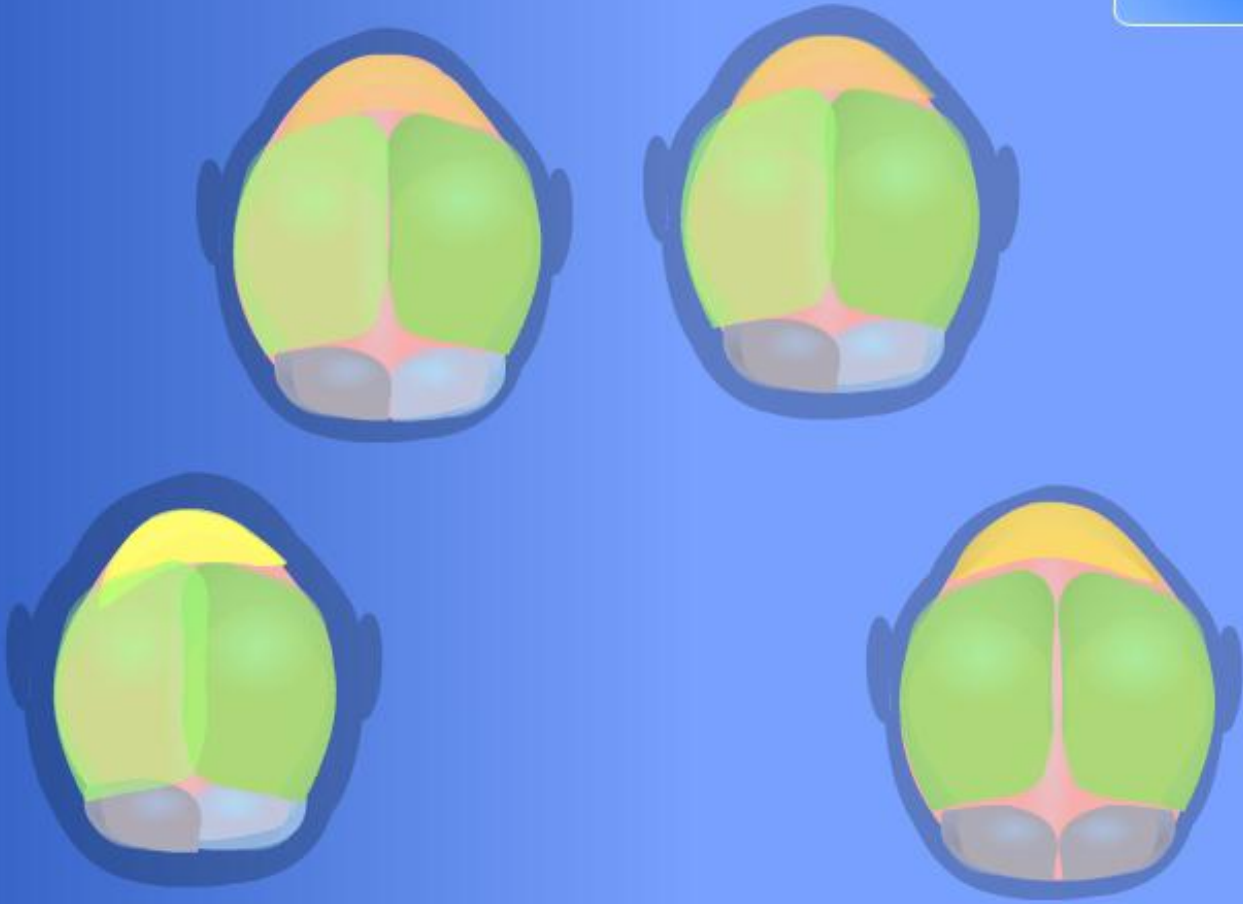
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- Overlapping of the bones

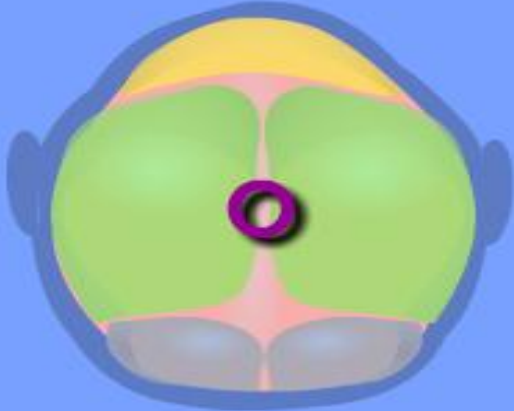
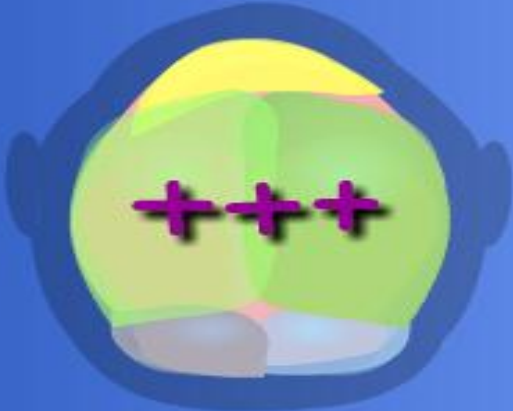
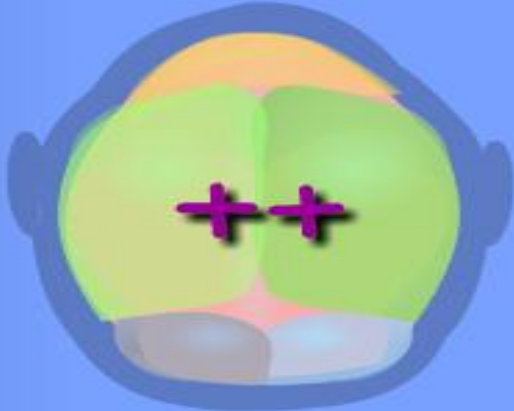
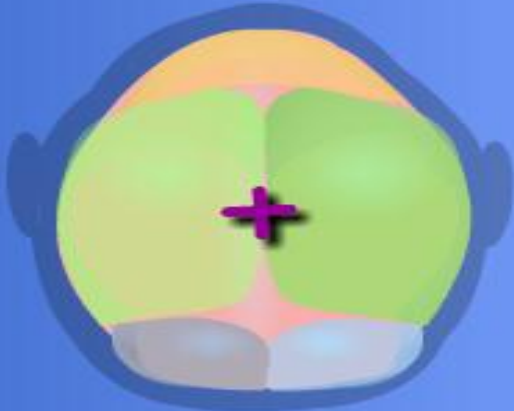
+++

- Severe overlapping of the bones

○
+
++
+++



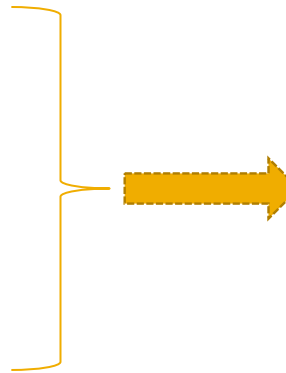
exercis



PART 3: PROGRESS OF LABOUR

16

1. Cervical dilatation
2. Descent of the fetal head
3. Uterine contractions



ANNEX 2: Partograph

Name	Gravida	Para.	Hospital no.
Date of admission	Time of admission	Ruptured membranes	hours

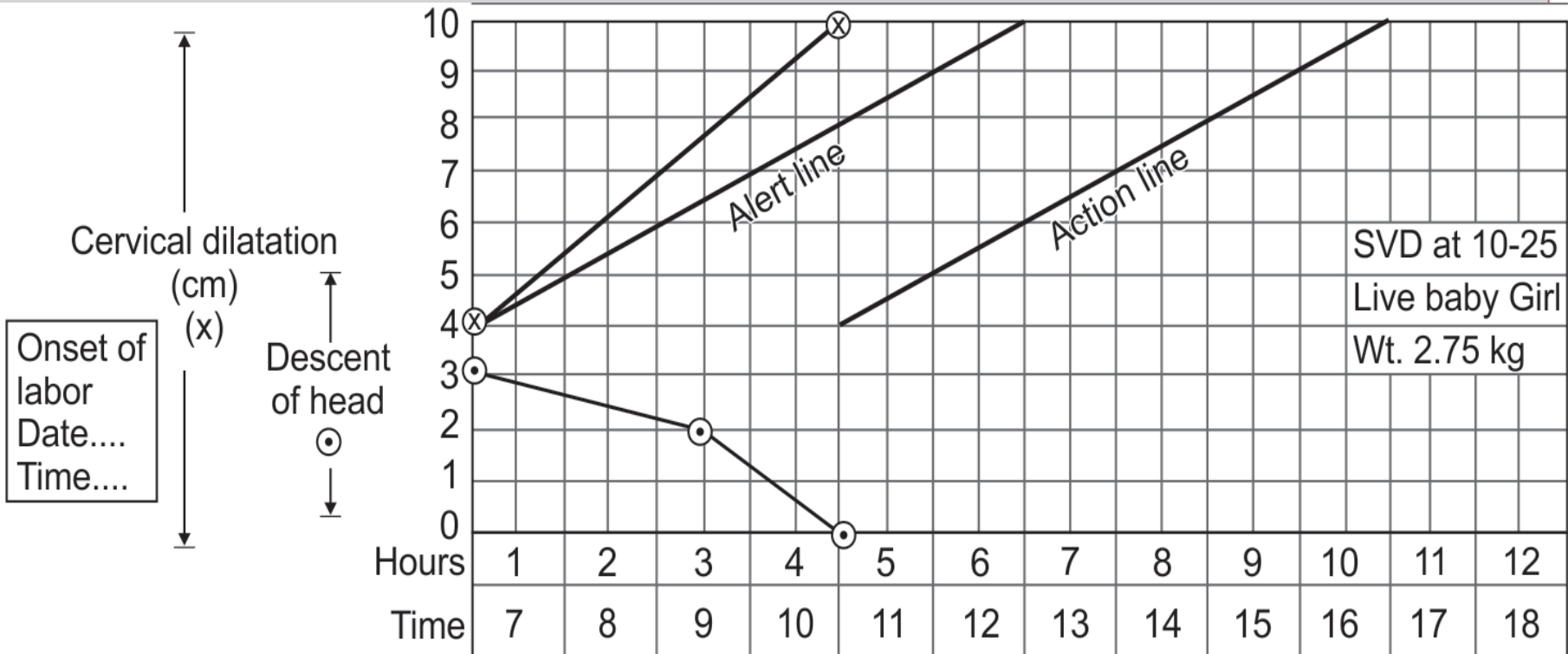
Fetal heart rate	180	170	160	150	140	130	120	110	100																	
Liquor Moulding	10	9	8	7	6	5	4	3	2	1																
Cervix (cm) [plot X]	<div style="display: flex; justify-content: space-between;"> Latent Phase Active Phase </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> Alert Asleep </div>																									
Descent of head [plot O]																										
Hours	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Time																										
Contractions per 10 mins	5	4	3	2	1																					
Oxytocin U/L drops/min																										
Drugs given and IV fluids																										
Pulse	180	170	160	150	140	130	120	110	100	90	80	70	60													
BP																										
Temp °C																										
Urine protein volume																										
Urine acetone																										

Source: WHO, used by permission

CERVICAL DILATATION

17

- It is the most important information and the surest way to assess progress of labor.
- Cervical dilatation: assess at each vaginal examination and mark with a cross ✕.
- **Alert line**: starting at 4 cm of cervical dilatation, up to the point of expected full dilatation at the rate of 1 cm per hour.
- **Action line**: parallel and 4 hours to the right of the alert line.



DESCENT OF THE FETAL HEAD

19

- It should be assessed by **abdominal examination** immediately before doing a vaginal examination, using the **rule of fifth** to assess engagement
- The rule of fifth means the palpable fifth of the fetal head are felt by abdominal examination to be above the level of symphysis pubis and recorded as a circle (O) at every vaginal examination.

Not engaged

$\frac{5}{5}$



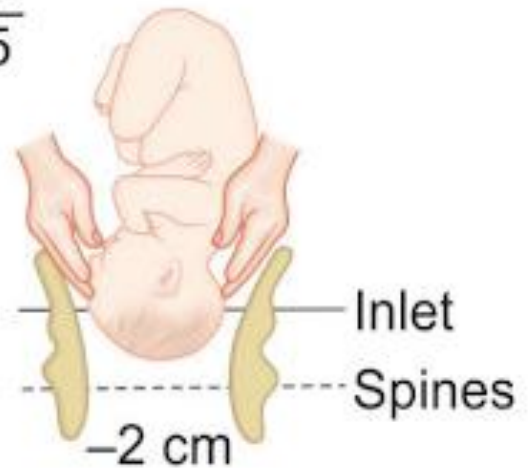
Not engaged

$\frac{4}{5}$



Not engaged

$\frac{3}{5}$



Not engaged (high)

$\frac{2}{5}$



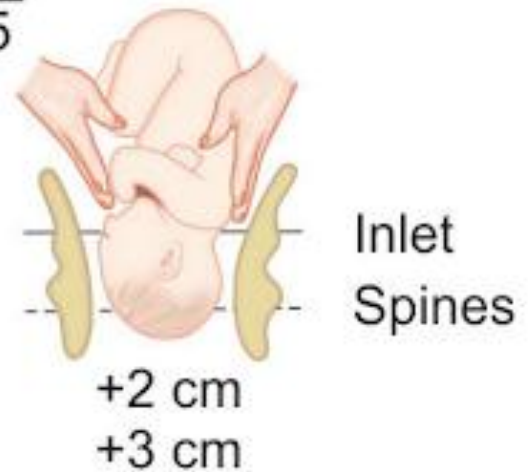
Engaged (mid)

$\frac{1}{5}$



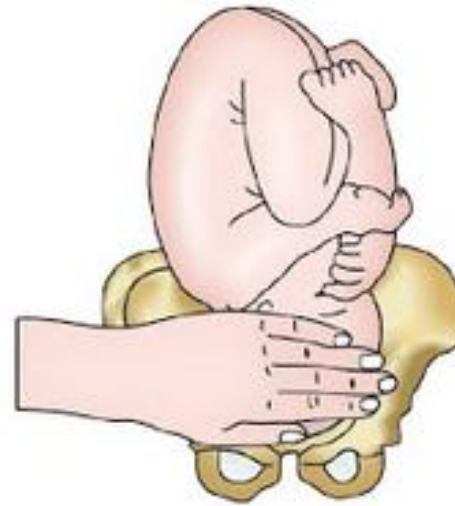
Engaged (low)

$\frac{0}{5}$





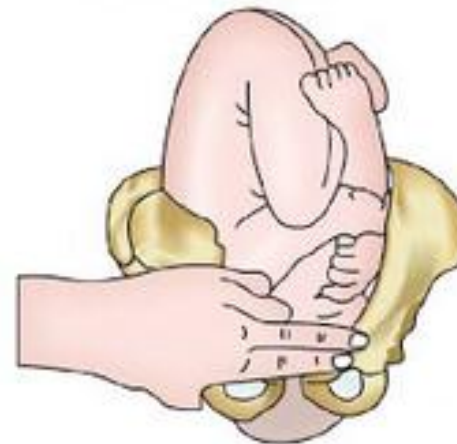
A. Head is mobile above the symphysis pubis = 5/5



B. Head accommodates full width of five fingers above the symphysis pubis



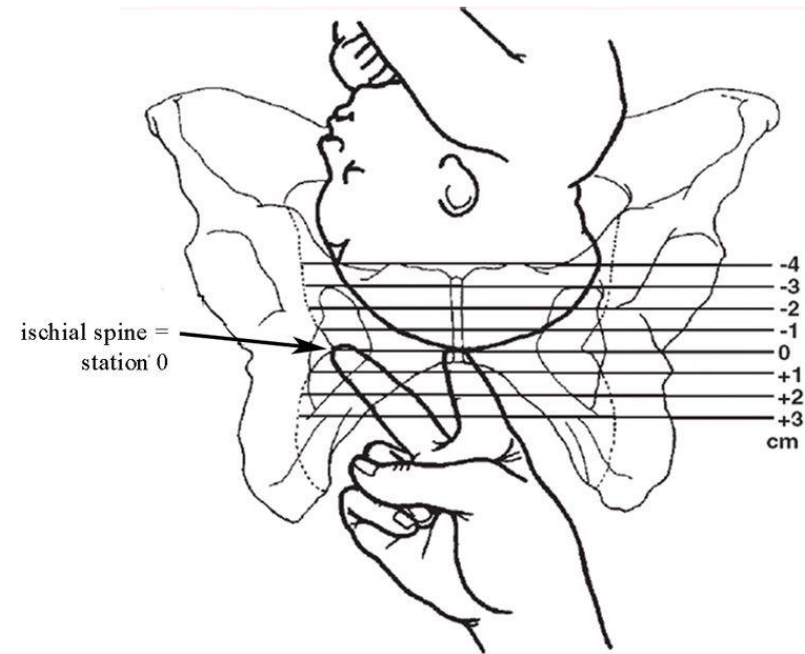
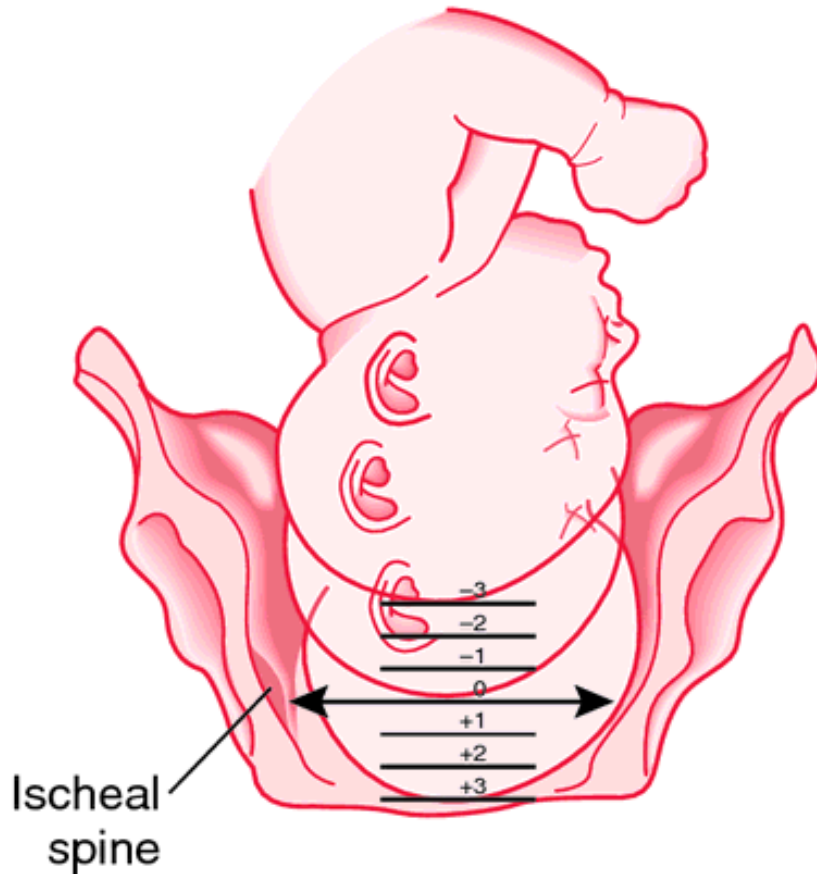
C. Head is 2/5 above the symphysis pubis



D. Head accommodates two fingers above the symphysis pubis

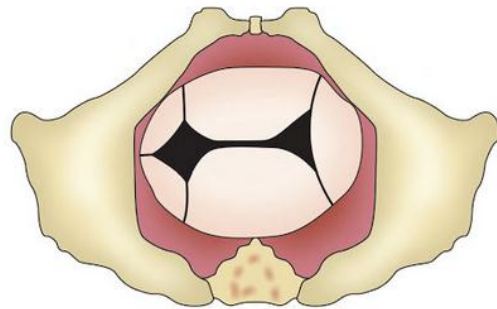
Assessing descent of the fetal head by vaginal examination

22

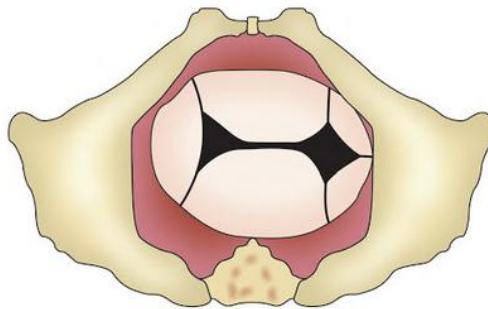


Fetal position

23



Left occiput transverse



Right occiput transverse

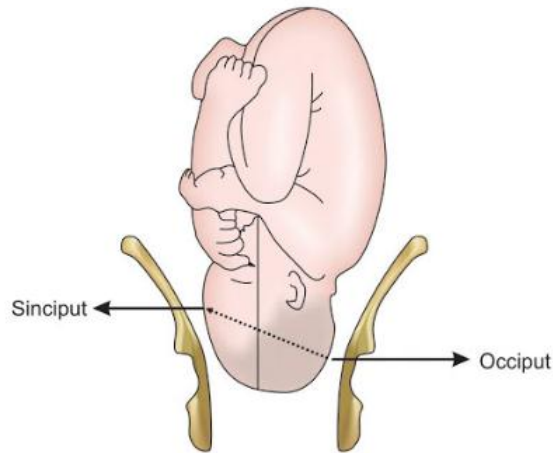
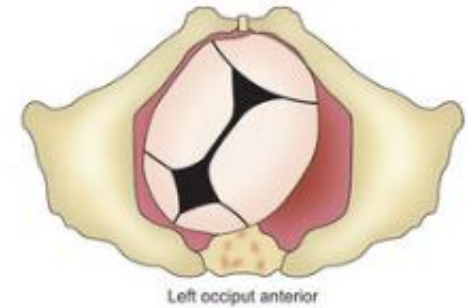


Figure 24: Well-flexed vertex



Left occiput anterior



Right occiput anterior



Occiput anterior

Figure 23: Occiput anterior positions

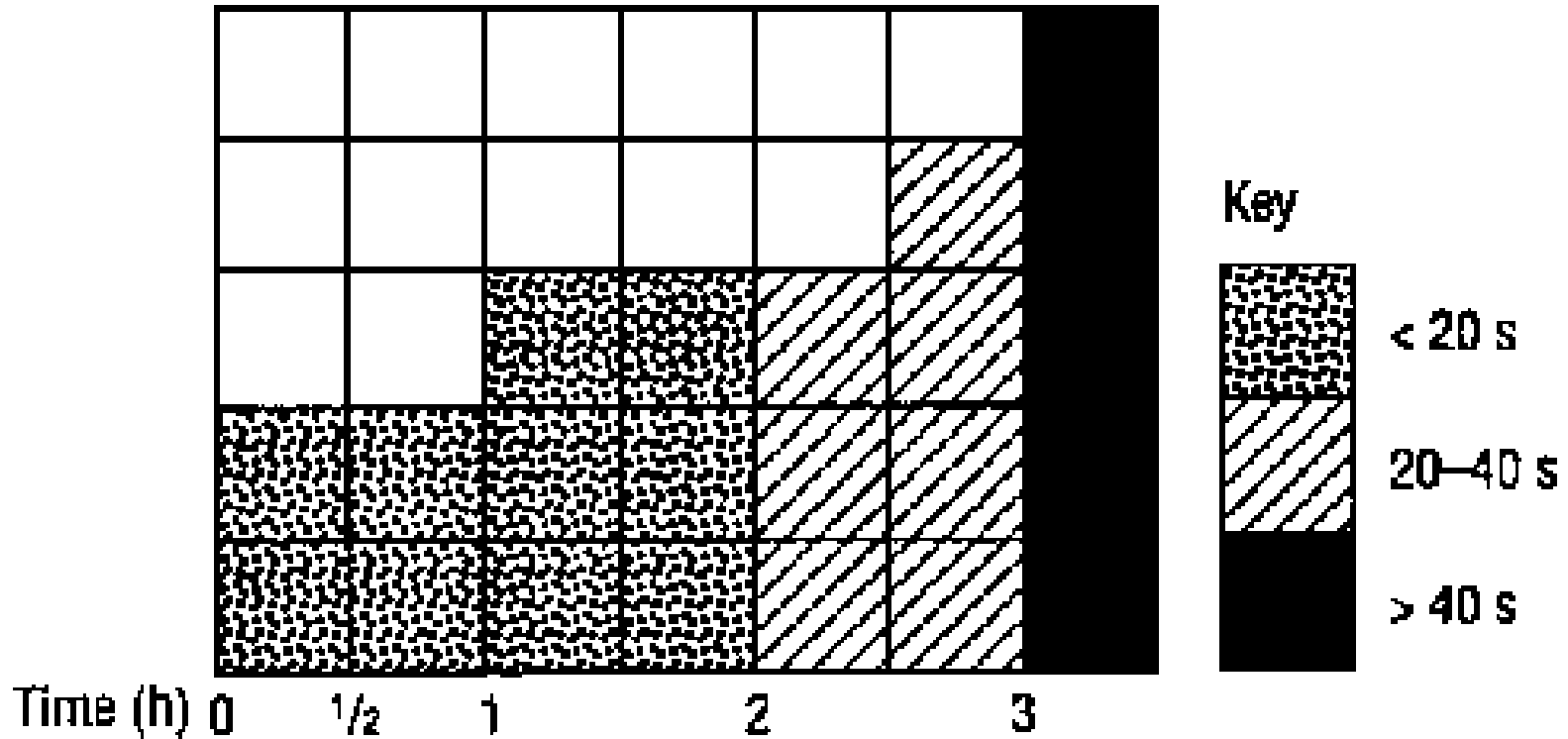
Uterine contractions

24

- Frequency, duration and strength of uterine contractions (assessed by palpation for 10 minutes): record every 30 minutes.
- The number of squares filled in records the number of contractions in 10 minutes. The shading shows the length of contractions.

Palpate number of contraction in ten minutes and duration of each contraction in seconds

25



PART 4: MATERNAL CONDITION

26

1. Drugs , IV fluids , and oxytocin, if labor is augmented
2. Pulse , blood pressure
3. Temperature
4. Urine volume , analysis for protein and acetone



ANNEX 2: Partograph

Name	Gravida	Para.	Hospital no.
Date of admission	Time of admission	Ruptured membranes	hours
180 170 160 150 140 130 120 110 100	Fetal heart rate		
Liquor Moulding			
10 9 8 7 6 5 4 3 2 1 0	Cervix (cm) [plot X]		
3 2 1 0	Descent of head [plot O]		
0	Hours		
5 4 3 2 1	Contractions per 10 mins		
Oxytocin U/L drops/min			
Drugs given and IV fluids			
180 170 160 150 140 130 120 110 100 90 80 70 60	Pulse and BP		
Temp °C			
Urine protein and acetone volume			

The partograph form includes a grid for plotting data over 24 hours. The 'Cervix (cm)' plot shows a latent phase from 0 to 3 cm (0-8 hours) and an active phase from 3 to 10 cm (8-19 hours). The 'Descent of head' plot shows a latent phase from 0 to 3 cm (0-8 hours) and an active phase from 3 to 10 cm (8-19 hours). The 'Contractions per 10 mins' plot shows a latent phase from 0 to 3 contractions (0-8 hours) and an active phase from 3 to 10 contractions (8-19 hours). The 'Pulse and BP' plot shows a latent phase from 0 to 3 contractions (0-8 hours) and an active phase from 3 to 10 contractions (8-19 hours).

Source: WHO, used by permission

OXYTOCIN AND DRUGS

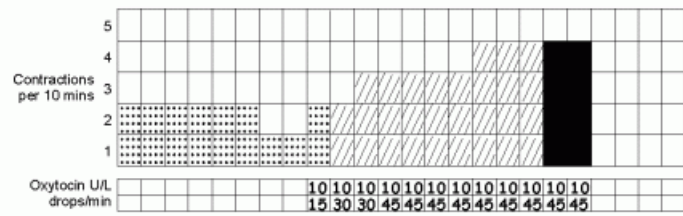
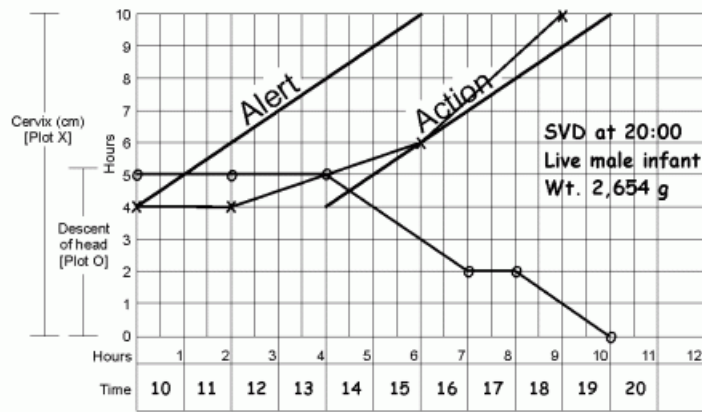
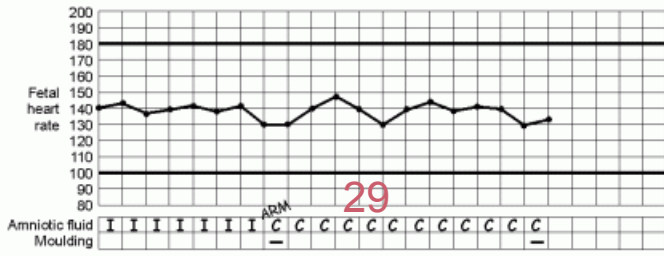
27

- Oxytocin: record the amount (in units) of oxytocin per volume of IV fluids, and the number of drops per minute, every 30 minutes when used.
- Drugs given: record any additional drugs given.

PULSE, BP, TEMPERATURE AND URINE

28

- Pulse: record every 30 minutes and mark with a dot (•).
- Blood pressure: record every 4 hours and mark with arrows (↕) unless the patient has a hypertensive disorder or pre-eclampsia, in which case record every 30 minutes.
- Temperature: record every 4 hours.
- Urine, ketones and volume: ideally record every time urine is passed.



Drugs given and IV fluids



Temp °C 36.2 36.2 36.8 37 37

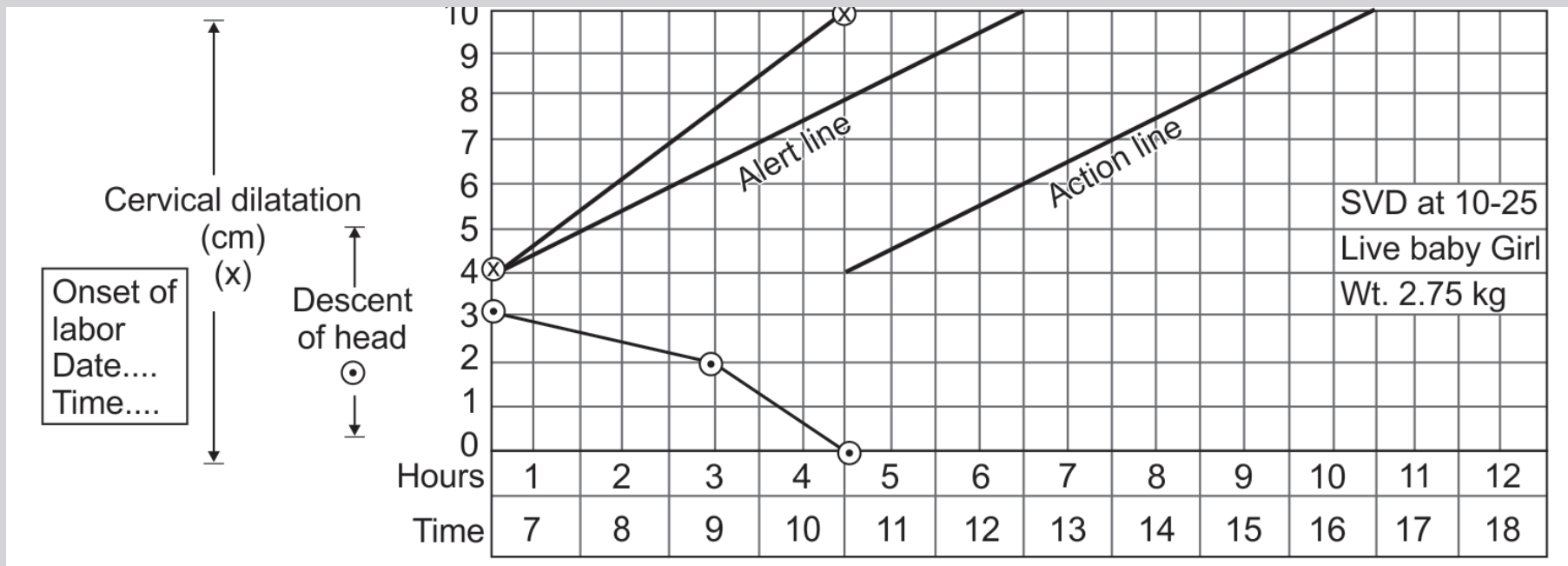
Urine	protein	acetone	volume
	—	—	400
	—	—	300

Management of labor using the partograph

NORMAL

31

- In normal labor cervical dilatation should be either on the alert line or left to that



Between alert and action lines

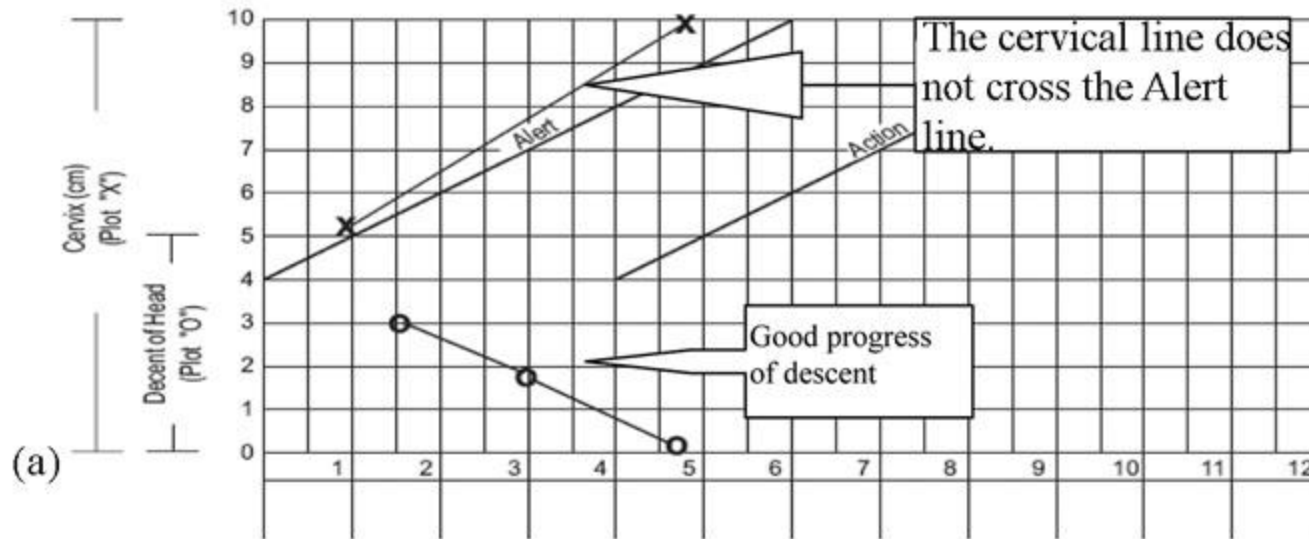
32

In health center

- The women must be transferred to a hospital with facilities for cesarean section, unless the cervix is almost fully dilated
- Observe labor progress for short period before transfer

In hospital

- Continue routine observations
- ARM may be performed if membranes are still intact



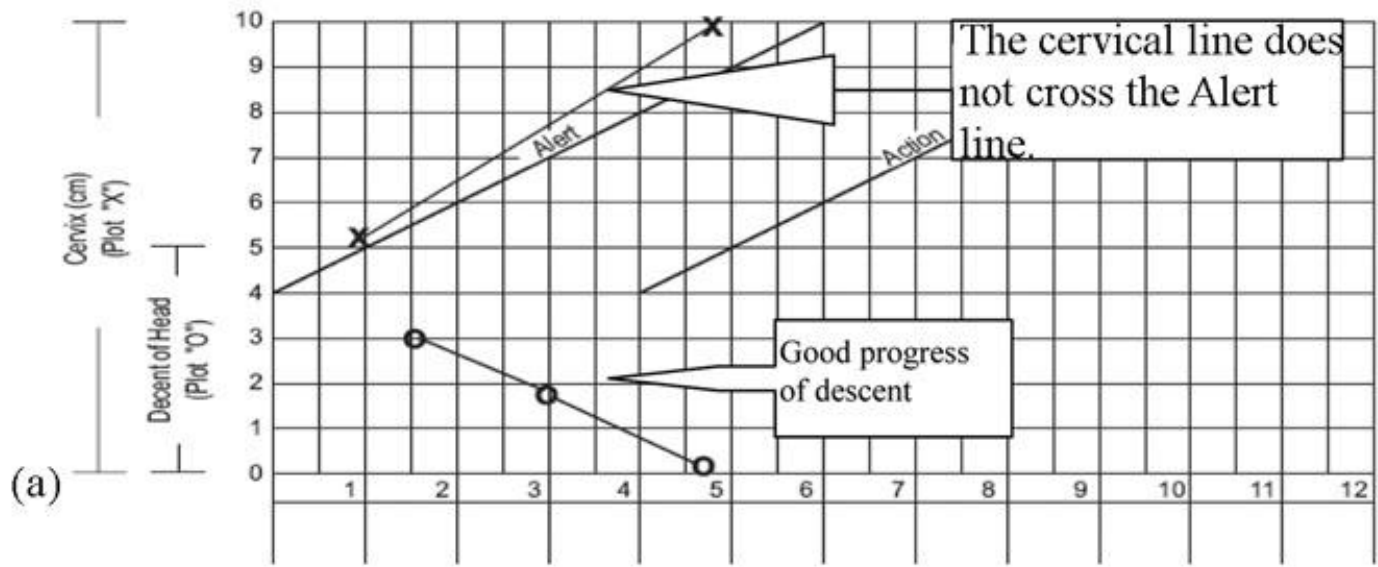
MOVING TO THE RIGHT OF ALERT LINE

34

- This means warning
- Transfer the woman from health center to hospital

REACHING THE ACTION LINE

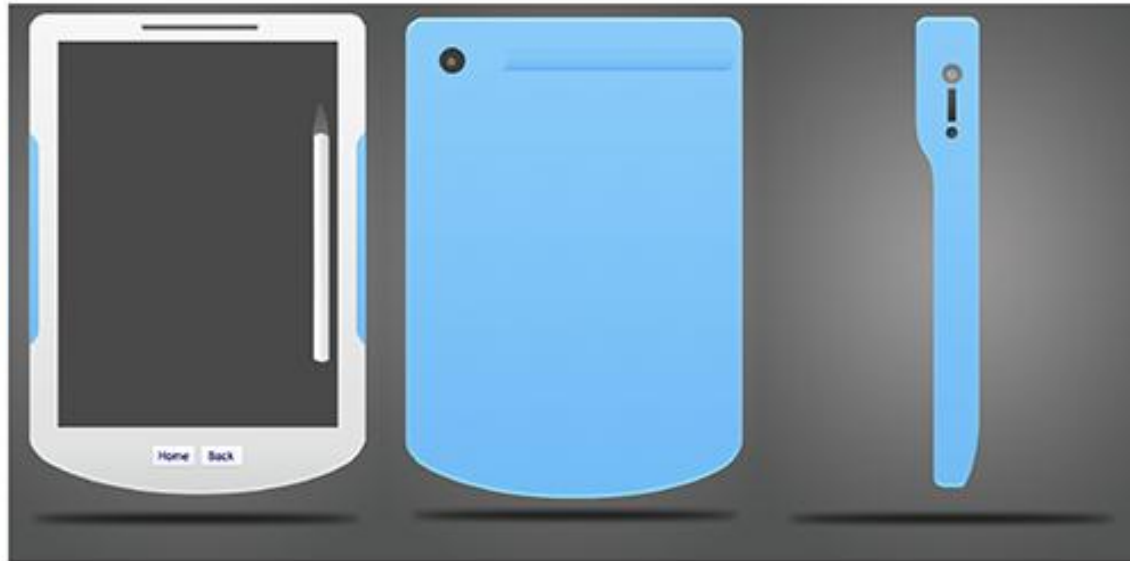
- This means possible danger
- Decision needed on further management



e-partograph

36

A Device to address needs



■ Dimensions

142.5mm x 203.5mm x 26mm

Screen: 7.5"

Stylus: 8.5mm x 11mm

■ Technology

Resistive Touch screen with stylus input

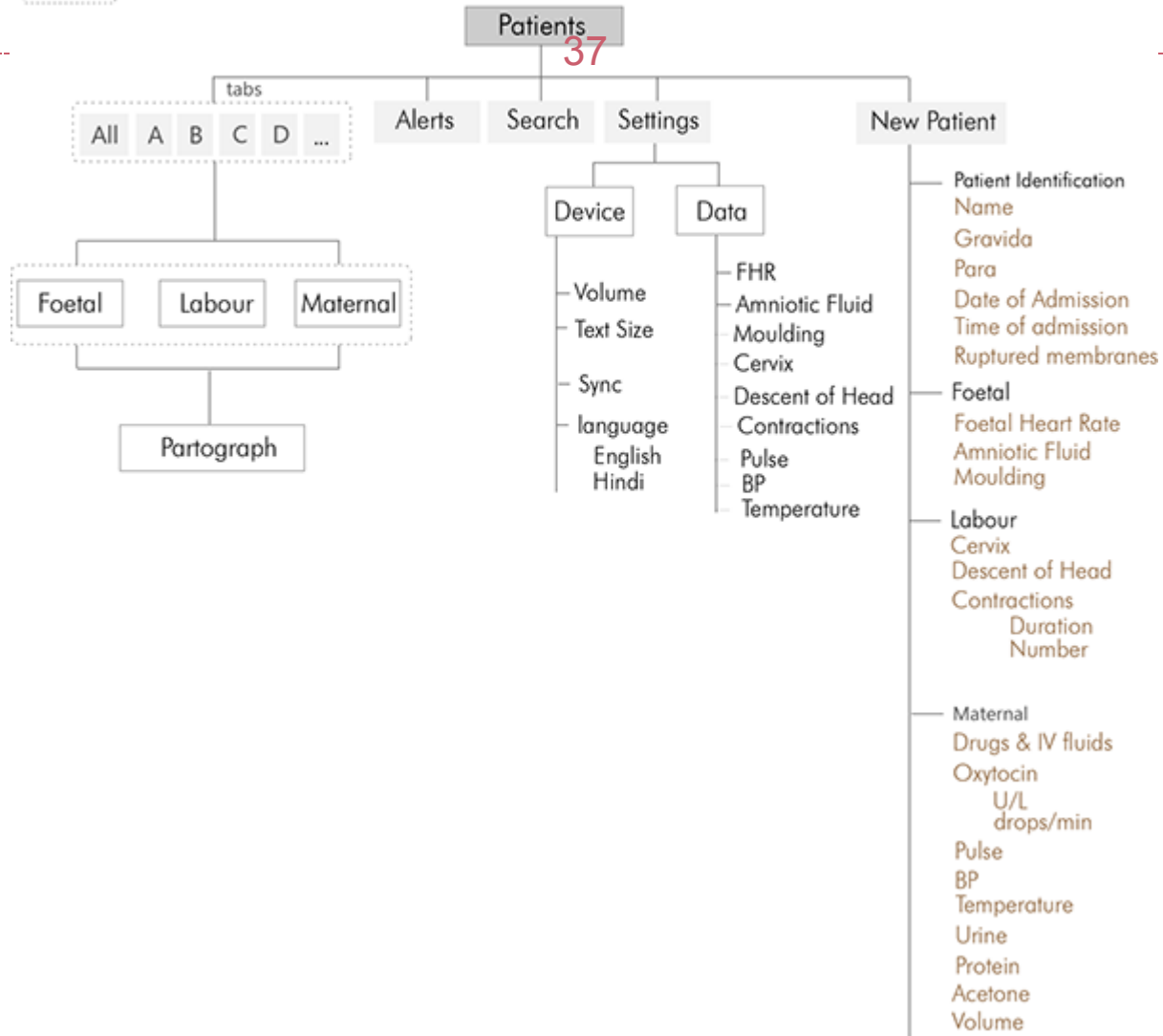
GPRS Connectivity

Inbuilt Speakers

Device Specifications

- Rubber Grip for anti slip grip
- USB port for connecting to printer
- Rechargeable battery
- Battery backup of 12 hours
- Back Lit Display night illumination
- 6 MP Camera
- Internal Storage 2GB
- Slot for stylus

Information Architecture



Oct 27, Wed

9:00



New Patient

Next

Patient Identification

Step 1 of 4



Capture
Photo

Time of Admission

09:00

Name

Seema R

Gravida

1

Para











0+0

Hospital Number







Oct 27, Wed 8:30

Patients New

	Nitya NP	Time of Admission: 6:00 AM Next Reading: ³⁹ in 15 min
		
5 cm	130	3 cm
		
		View Partogram
	Maya M	Time of Admission: 8:00 AM Next Reading: in 30 min
		
4 cm	140	3 cm
		
		View Partogram

All A B C D E F G I J K L M N O P Q R S T U V W X Y Z

- Settings Search
-  Cervical Dilation
-  Foetal Heart Rate
-  Head Descent
-  The Strength of Contractions

Alphabetical Listing

Oct 27, Wed

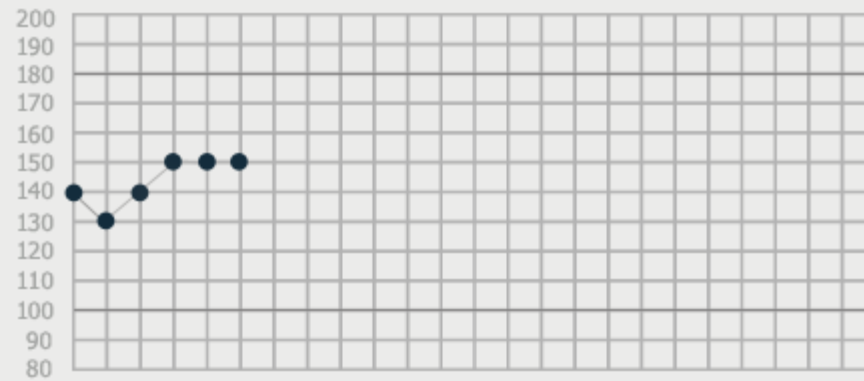
08:30



Partograph

Name **Nitya P** Gravida **4** Para **3+0** Hospital No. **1443**
Date of admission **27/10/2012** Time of admission **06:00 AM** Ruptured Membranes **05:00 AM**

Foetal Heart Rate



Amniotic Fluid

C

Moulding

1

Foetal

Labour

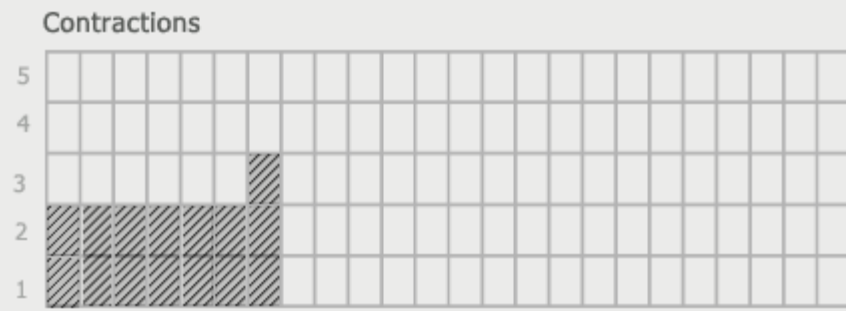
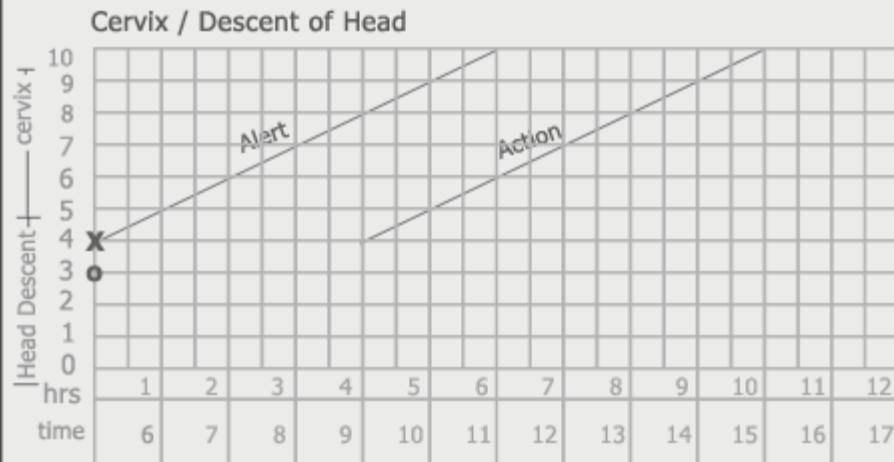
Maternal

Oct 27, Wed

08:30

Partograph

Name Nitya P Gravida 4 ~~4~~ 3+0 Hospital No. 1443
Date of admission 27/10/2012 Time of admission 06:00 AM Ruptured Membranes 05:00 AM



Foetal

Labour

Maternal

Oct 27, Wed

08:30



Partograph

Name Nitya P Gravida 4 ~~Para~~ 3+0 Hospital No. 1443
 Date of admission 27/12/2012 Time of admission 06:00 AM Ruptured Membranes 05:00 AM

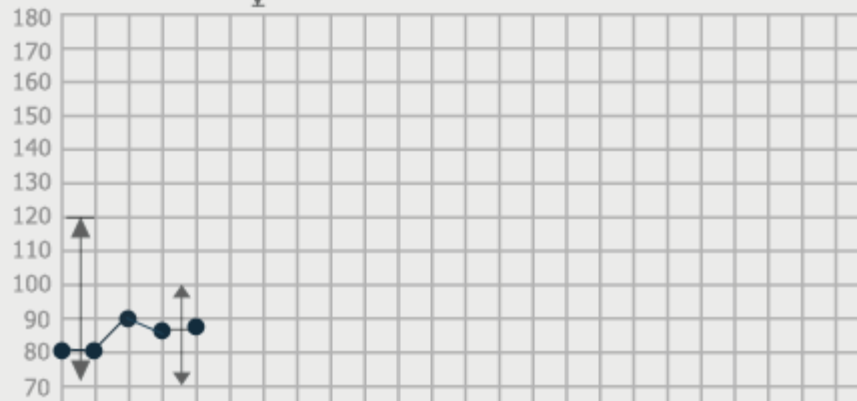
Oxytocin

U/L																				
drops/min																				

Drugs & IV fluids

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Pulse ● B.P



Foetal

Labour

Maternal

