Using Labour Care Guide for preterm labour to document intrapartum care Provider Guide

WHO ACS-IR

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Learning objectives

The learning materials for training on the "Using Labour Care Guide for preterm labour to document intrapartum care" module were developed to accompany the training activity on care for threatened preterm birth for the purpose of the WHO ACS-IR trial and to improve intrapartum care for women experiencing preterm labour (PTL) and maternal and newborn outcomes. They are designed to be delivered as a one-day, on-site training for groups of six participants. Training activities are designed to be provided on-site so that the skills of the entire team of health workers involved in care of women in preterm labour (obstetrician, midwife, nurses, matron) are strengthened.

The overall goals are to ensure that (1) all health workers providing care for women in PTL are giving evidence-based care and (2) women have the best possible experience of care during preterm labour and birth. This includes providing supportive care, monitoring the well-being of the woman and baby, monitoring labour status using the Labour Care Guide (LCG) for PTL, and alerting the neonatal team to prepare for a preterm newborn in a timely manner. An emphasis is placed on health workers' capacity to support women's choices, provide respectful and supportive care to women, and communicate effectively with the woman and her companion of choice.

Training activities should be followed by mentorship to help ensure health workers have the required knowledge, skills, and confidence to correctly monitor and care for women in preterm labour, complete and interpret the LCG for PTL, and use findings on the LCG for PTL to provide timely, quality care for women in preterm labour.

The learning materials for the "Using Labour Care Guide for preterm labour to document intrapartum care" module are designed for all health workers involved in care of women in preterm labour (obstetrician, midwife, nurses, matron) who need to provide close monitoring and supportive care and be able to rapidly identify complications for management or referral/consultation with a senior health worker.

ALL participants should have successfully completed the module: "Risk of Preterm Birth"

At the end of the training activity, participants will be able to:

- Recognize when prolonging labour is unsafe for the woman and/or baby
- Describe the goals of labour management when women are in PTL
- Provide respectful care to women in PTL
- Consistently apply infection prevention practices when caring for women in PTL
- Describe appropriate use of vaginal examinations to manage care of women in PTL
- Describe frequency of monitoring women in PTL
- List the principal aims of the LCG for PTL
- Identify for whom, when, and where the LCG for PTL can be used
- Recognize the principal elements and sections of the LCG for PTL
- Competently and confidently assess all parameters in the LCG for PTL
- Correctly fill out the LCG for PTL
- Competently use the reference thresholds (alert signs) to trigger reflection and specific action(s)
- Make an assessment based on findings from the evaluation
- Make a plan of care with the woman and her companion.

Labour Care Guide for PTL: Quick Guide

The Quick Guide for the Labour Care Guide for PTL was developed to facilitate quick consultation for health workers who have received training in care of women at high risk of preterm birth.

Remember preterm labour is diagnosed using the following criteria: Painful contractions; Cramping, pelvic pressure, low backache; Vaginal discharge of mucus, which may be clear, pink, or slightly bloody (i.e., mucus plug, bloody show); At least 6 regular uterine contractions/hr and at least one of the following: Cervical dilation ≥3 cm and/or Effacement ≥75% (cervix is approximately 1 cm long or shorter).

For whom should the LCG for PTL be used?

Women diagnosed as being in labour - at least 6 regular uterine contractions/hr and at least one of the following: Cervical dilation ≥3 cm or Effacement ≥75% **- AND**

- Gestational age less than 37+0 weeks and fetal viability have been confirmed by ultrasound **AND**
- The fetus is alive **AND**
- It has been deemed safe to prolong the pregnancy after a comprehensive examination on admission.

NOTE: If PTL is being induced or the woman is in PTL and continuing the pregnancy is no longer safe for the woman and/or fetus (e.g. maternal/fetal compromise, fetal demise, eclampsia, clinical chorioamnionitis, significant placental abruption), use the Labour Care Guide for PTL to monitor labour and care for the woman. The neonatal care team must still be alerted when PTB is imminent.

When should I start using the LCG for PTL?

Once PTL has been established and it is deemed safe to prolong the pregnancy, ***regardless of cervical dilatation, status of membranes and stage of labour, including if the woman presents in latent phase of first stage or second stage.***

Why should the LCG for PTL be implemented?

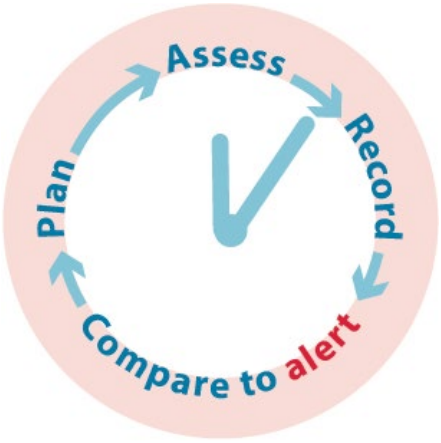
To:

- improve chances of survival and outcomes for the preterm baby and minimize risks to the woman
- identify potential complications associated with PTL in a timely manner
- ensure that if ACS have been given, there is an assessment for eligibility for and administration of nifedipine for delaying birth and giving time for ACS to be effective and $MgSO_4$ for neuroprotection
- administer medications per protocol
- adjust frequency of monitoring in labour if indicated
- assess for and manage side effects of medications
- assess if the goal for labour management is being achieved
- assess the woman's coping mechanisms to adjust support strategies as needed
- identify if birth is imminent to alert the neonatal team and prepare for birth of a preterm infant
- prevent unnecessary use of interventions in labour
- ensure continuity of care between providers and prevent medication errors
- improve documentation and support
- support audit and quality improvement of management of PTL

Where can the LCG for PTL be implemented?

- The LCG for PTL is designed for use where women can receive comprehensive obstetric care, including access to safe caesarean at all times, and their preterm newborns can receive care in a neonatal unit with ventilatory support available.

How to use the Labour Care Guide for PTL: 4 steps

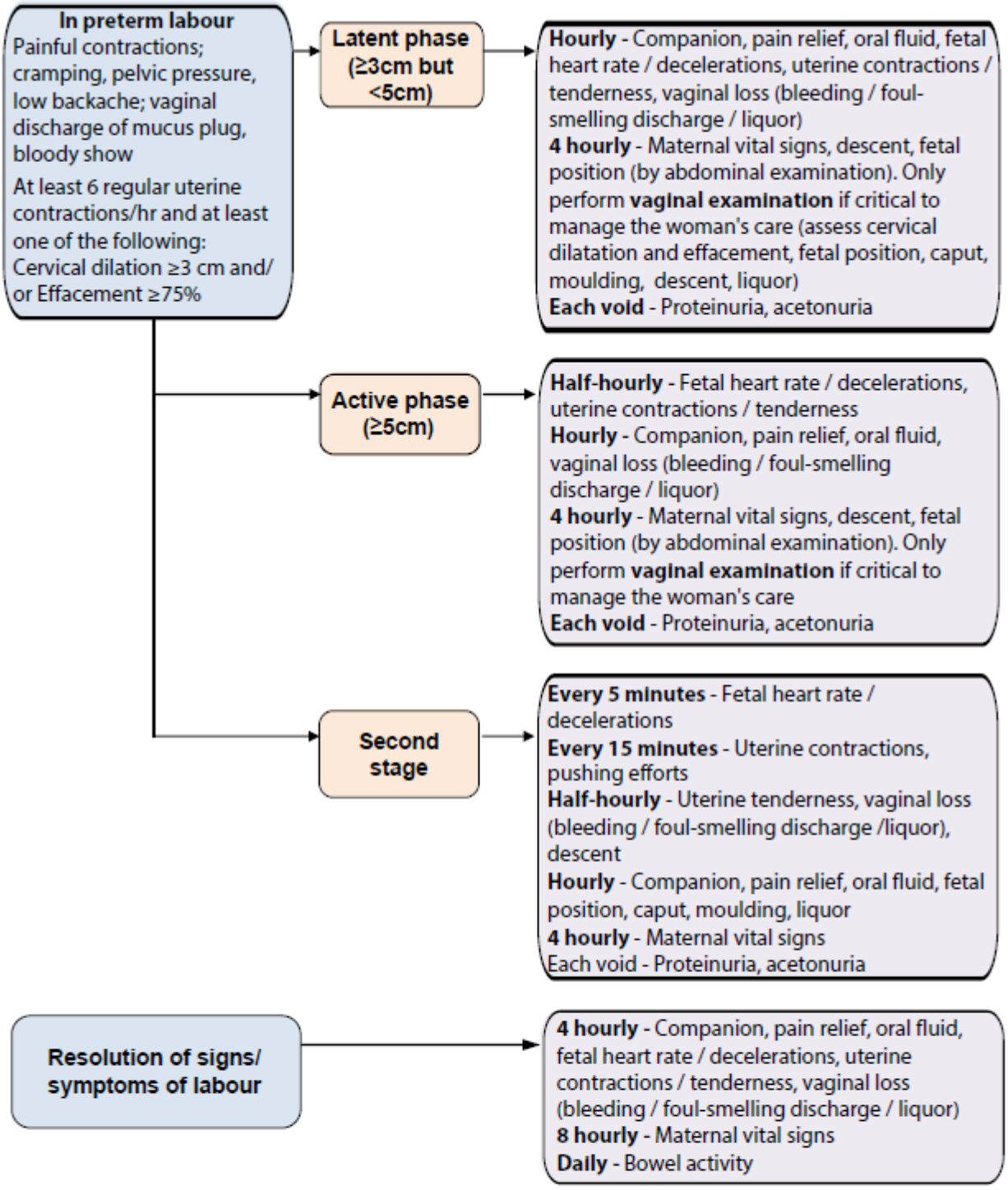


1. **Assess**: assess the well-being of the woman and her baby and the progress of labour. The LCG for PTL lists the parameters that should be evaluated, which serve as reminders.
2. **Record:** document labour observations each time you complete an assessment during the first and second stages of labour.
3. **Check reference threshold**: compare labour observations with reference values in the "Alert" column. The decision to intervene during labour should be primarily based on a deviation from expected observations during the assessments. Health workers should circle any observations meeting the threshold to highlight those observations that require special attention.
4. **Plan:** decide and document whether and what interventions are required or if you only need to continue monitoring (in case of normal progress). Involve the woman and her companion in the decision-making process.

Additional considerations

- The LCG for PTL is intended as a guide and ***is not a substitute for good clinical judgment***. Variations may be appropriate, considering local clinical guidelines, available resources, level of care, individual women's circumstances, risk status, and preferences.
- Decisions should not be based on findings from individual observations but rather on an ***overall assessment*** of the woman and her baby.
- It is important that health personnel ***adapt the monitoring frequencies*** to each particular clinical case. It is expected that the required frequency of assessment will depend on the results of labour observations and the status of the woman and her baby.
- ***For PTL the first examination should be by a sterile speculum examination – when monitoring labour, avoid vaginal examinations (VEs) unless they are critical for managing the woman's care***. Assess all parameters that require a VE at the same time - determine cervical dilatation and effacement, caput, and moulding, and confirm fetal position, descent, and characteristics of amniotic fluid, if membranes are ruptured.
  - ***Do NOT perform VEs if there is suspected or confirmed placenta praevia.***
  - ***Limit VEs if membranes are ruptured.***
  - Obtain the woman's consent before beginning the VE and ensure privacy during the examination. Do not start the examination during a contraction.
  - If there are fewer than 3 contractions/10 minutes lasting less than 20 seconds, do not perform VEs unless there are indications that labour is progressing - e.g. contractions have restarted or increased in frequency and duration.
- Health workers should use findings to facilitate ***early identification of potential complications***, including:
  - Signs of worsening maternal or fetal status
  - New-onset, worsening, or bright red vaginal bleeding
  - Signs of clinical chorioamnionitis (maternal fever in addition to uterine tenderness, maternal or fetal tachycardia, offensive/purulent vaginal discharge, leucocytosis)
  - Umbilical cord compression, cord prolapse
- If the goal is to delay birth 24–48 hours to complete a course of ACS or the woman is being treated for an infection thought to be the cause of PTL and there is a ***decrease in the number of uterine contractions in 10 minutes and improvements in cervical status***, alert a senior health worker and consider transferring the woman from the labour ward to the antenatal ward. Continued monitoring on the antenatal ward is essential for ensure PTL has resolved or does not restart.

Monitoring women in PTL



1. Avoid digital vaginal examination unless indicated
2. Women with ongoing painful regular contractions should be monitored in the labour ward using the Labour Care Guide for PTL/PTB
3. If signs/symptoms of labour are resolving (decrease in the number of uterine contractions in 10 minutes and improvements in cervical status) women may be monitored in the antenatal ward using facility monitoring tools
4. If the episode of PTL has been arrested, prior to discharge offer the woman and her family the opportunity to debrief with clinicians involved in her care and inform the woman about signs and symptoms of PTL and when and where to seek care.

Instructions for completing the LCG for PTL: Circle any observation meeting the criteria in the 'alert' column, alert the senior Midwife or Doctor and record the assessment and action taken. If labour extends beyond 12h, please continue documenting care on additional page for the Labour Care Guide for PTL.

Abbreviations: **Y** – Yes, **N** – No, **D** – Declined, **U** – Unknown; Decelerations: **E** – Early, **L** – Late, **V** – Variable; Amniotic fluid: **I** – Intact, **C** – Clear, **M** – Meconium, **B** – Blood, **P** – Purulent; Fetal position: **OA** – Occiput Anterior, **OP** – Occiput Posterior, **OT** – Occiput Transverse, **B** - Breech, **TL** - Transverse lie; Uterine tenderness: **NT** = Non-tender uterus, **TU** - Tender uterus; Proteinuria/Acetonuria: **P+** – Protein, **A+** – Acetone; Medications: **ND** - Not Due

How to complete Section 1: Identifying information

Variable	Step 1: Assess	Step 2: Record
Date		▪ Record the date on which the parameters for the LCG for PTL being completed are assessed and recorded. This is important if labour is stopped and additional pages are used if labour restarts.
Page number		▪ Record the page number for the LCG for PTL being completed. For example: ▪ If the woman gives birth without needing to complete additional pages, record "Page 1/1". ▪ If additional pages of the LCG for PTL are used, record the total number of pages completed once the woman gives birth, e.g. "Page 1/12", "Page 1/2".
Name	Ask the woman her full name.	▪ Record the woman's full name and verify that it matches the name on her medical record. ▪ If part of a study, match the woman's name to her PID
Parity	Extract from medical records the number of times the woman has given birth to a baby after the age of viability (as per local guidelines).	▪ Use the local coding system to record parity, e.g., Parity (or P) = number of babies born (after the local definition of viability).
Gestational age	Record the gestational age	▪ Gestational age in weeks and days ▪ Date the gestational age was confirmed by the earliest ultrasound. Use local format to record dates (e.g. dd/mm/yy, or mm/dd/yy, or dd/mm/yyyy).
Ruptured membranes	On what date and at what time were amniotic membranes ruptured?	▪ Date and time [hh: mm using the 24-hour clock system] that rupture of membranes occurred. The woman or her companion could report these data or be extracted from medical records if membranes ruptured after admission but before initiating the LCG. ▪ Record "U" or "unknown" if rupture of membranes is confirmed and the woman cannot report the date and/or time, and there is no documentation in the medical record.

Variable	Step 1: Assess	Step 2: Record
Risk factors for PTL	There are five main causes of preterm birth 1. Preterm labour 2. Preterm prelabour rupture of membranes 3. Severe pre-eclampsia/eclampsia 4. Antepartum haemorrhage 5. Provider initiated birth There are risk factors predisposing women to PTB. Review the woman's client records for any risk factors for PTB.	Record known obstetric, medical, and social risk factors for PTL with implications for care provision and potential outcome of labour management. For example: ▪ indications that prolonging the pregnancy is harmful to the woman or baby (e.g. fetal compromise, eclampsia, placental abruption) ▪ pre-existing medical conditions (e.g., chronic hypertension, diabetes) ▪ maternal infection (e.g. chorioamnionitis, urinary tract infection, sexually transmitted infections, bacterial vaginosis, malaria) ▪ anaemia (second trimester: Hb < 10.5 g/dL; Hct < 32%; third trimester: Hb < 11 g/dL; Hct < 33%) ▪ obstetric conditions (e.g., severe pre-eclampsia/eclampsia, placental abruption, placenta praevia, multiple gestation, polyhydramnios) ▪ woman's advanced age, adolescent pregnancy ▪ previous preterm birth ▪ group B Streptococcus colonization.
PTL labour diagnosis	On what date and at what time was PTL diagnosed (at least 6 regular uterine contractions/hr and at least one of the following: Cervical dilation ≥3 cm / Effacement ≥75%.)?	▪ Date and time PTL was diagnosed. ▪ Use local format to record dates (e.g. dd/mm/yy, or mm/dd/yy, or dd/mm/yyyy). ▪ To avoid confusion, use the 24-hour clock system to record time [hh: mm]: 7:39 am is "07:39" and 7:39 pm is "19:39".
Active labour onset	On what date was active first stage of labour (cervix dilated at 5 or more centimetres) diagnosed?	▪ Date and time of active labour diagnosis. ▪ Use local format to record dates (e.g. dd/mm/yy, or mm/dd/yy, or dd/mm/yyyy). ▪ Record time using the 24-hour clock system.
Results of initial examination	Extract the most important pieces of the initial examination that will influence monitoring and care during labour.	Record: ▪ Vital signs, confirmation of ruptured membranes, cervical length/dilatation, number of uterine contractions/10 min
Medications administered at admission	Extract information about the medications that were administered after the initial examination.	Record: ▪ Medication, dose, route, and time of administration for any medications provided. ▪ If no medications were administered, record "None".
	NOTE: If a woman presents in second stage, the decision to administer interventions to improve preterm newborn outcomes should be determined on a case by case basis, in consultation with senior health workers.	
Medications prescribed on admission	Extract information about the medications that were prescribed after the initial examination.	Record: ▪ Medication, dose, route, and frequency of administration for any medications prescribed. ▪ If no medications were prescribed, record "None".

How to complete Section 2: Supportive care

	Step 1: Assess	Step 2: Record	Step 3: Check the threshold	Step 4: Plan
Companion	Does the woman have a companion of her choice present and providing support at the time of assessment? Experiencing preterm labour can be a traumatic experience for the woman, and she may have feelings of helplessness, anxiety, fear, guilt, and depression.	Y = Yes N = No D = Woman declines	**Alert: N = No**	▪ If you recorded "No," offer to find a companion of the woman's choice. ▪ If you recorded "Yes" or "Declines," continue to assess her preference during the progress of labour and childbirth. ▪ Encourage the woman to express her feelings; provide honest and accurate answers about the situation; keep her informed about the management of her labour, results, and what to expect; include her in decisions about care; provide reassurance and emotional support; encourage family members to participate in the plan of care.
Pain relief	Has the woman received any form of pain relief?	Y = Yes N = No D = woman declines to receive support for pain relief.	**Alert: N = No**	▪ If you recorded "No," offer pain relief according to the woman's preferences, availability of pain relief, and health worker's experience: – Relaxation techniques such as muscle relaxation, breathing, music, mindfulness, and manual techniques – Epidural at the lowest effective local anaesthetic concentration to avoid complications – Opioids such as fentanyl, diamorphine, and pethidine.
Oral fluid	Has the woman taken oral fluid on demand since her last assessment?	Y = Yes N = No D = Woman declines	**Alert: N = No**	▪ If you recorded "No," encourage the woman to take a light diet and drink as she wishes during labour.

How to complete Section 3: Assess well-being of baby

	Step 1: Assess	Step 2: Record	Step 3: Check the threshold	Step 4: Plan
Baseline FHR	Listen to the FHR for a minimum of 1 minute. Auscultate during a uterine contraction and continue for at least 30 seconds after the contraction. Assess the woman's pulse to differentiate between the heartbeat of the woman and that of the baby. A normal preterm fetus may have mild tachycardia and reduced FHR variability. Have a senior provider interpret abnormal findings.	Record the baseline FHR (as a single counted number of beats in 1 minute). For the second stage, record the most clinically significant value within the 15-minute timeframe.	**Alert: <110** **≥160** If fetal heart beat is not heard: 1) Ask others to listen, 2) Use a Doppler stethoscope, 3) Confirm fetal death by ultrasound.	▪ If FHR is <u><110 or ≥160</u>, ask the woman to turn on her left side, and recheck throughout at least three contractions. If fetal heart rate abnormalities persist, alert a senior health worker and follow clinical guidelines to manage the cause (e.g. maternal fever, bleeding, drugs, prolapsed cord). ▪ If FHR ranges between <u>110 and 159</u>, continue to assess FHR every 60 minutes during latent phase, every 30 minutes during active phase, and every 5 minutes during the second stage of labour.
FHR deceleration	Listen to the FHR for a minimum of 1 minute. Auscultate during a uterine contraction and continue for at least 30 seconds after the contraction.	Record the presence of decelerations using: N = No E = Early L = Late V = Variable	**Alert: L = Late**	▪ If <u>Late</u> decelerations or a single prolonged deceleration are present, ask the woman to turn on her left side, perform prolonged auscultation, alert a senior health worker and follow clinical guidelines. ▪ If <u>No</u> decelerations are present, continue to assess FHR every 60 minutes during latent phase, every 30 minutes during active phase, and every 5 minutes during the second stage of labour.
Amniotic fluid	What is the status of membranes? Is there leakage of amniotic fluid? If "Yes", what is the colour of the amniotic fluid? ***NOTE***: Remember - you can assess amniotic fluid / vaginal discharge without performing a vaginal examination.	I = Intact membranes C = Membranes ruptured, clear fluid M = Membranes ruptured, meconium-stained fluid: use +, ++ and +++ to represent non-significant, medium and thick meconium, respectively B = Membranes ruptured, blood-stained fluid P = Membranes ruptured, purulent fluid	**Alert:** **M+++ (thick meconium)** **B = Blood** **P = Purulent**	▪ If <u>blood-stained fluid or thick meconium or purulent discharge</u> is present, alert a senior health worker and follow clinical guidelines. ▪ If membranes are <u>Intact</u> or ruptured and amniotic fluid is <u>Clear</u>, assess amniotic fluid in 4 hours, unless otherwise indicated.

	Step 1: Assess	Step 2: Record	Step 3: Check the threshold	Step 4: Plan
Fetal position	Assess presentation and position by gentle abdominal examination and confirm when performing vaginal examination to assess other clinical parameters. ***NOTE:*** Before 36 weeks of pregnancy the fetus can move around easily and shift presentation and position. Breech is far more common so be sure to plan for this.	OA = Occiput anterior position OP = Occiput posterior position OT = Occiput transverse position B = Breech TL = Transverse lie The position of the baby will usually change during labour.	**Alert:** **OP = Occiput posterior** **OT = Occiput transverse** **B = Breech** **TL = Transverse lie**	▪ If breech presentation or transverse lie are detected, alert a senior health worker and follow clinical guidelines. ▪ If occiput positions are diagnosed, reassess position with an abdominal examination every 2-4 hours and/or at the next vaginal examination, unless otherwise indicated.
Caput	When performing vaginal examination to assess other clinical parameters, evaluate the presence of caput succedaneum (diffuse swelling of the scalp).	Grade caput from 0 (none) to +, ++ or +++ (marked).	**Alert: +++**	▪ If caput = +++, alert a senior health worker and follow local protocols. ▪ If caput = 0 to ++, repeat the assessment during the next vaginal examination in 4 hours, unless otherwise indicated.
Moulding	When performing vaginal examination to assess other clinical parameters, evaluate the shape of the fetal skull and the degree of overlapping fetal head bones during labour.	Grade from 0 (none) to +++ (marked). Assign: + (sutures apposed), ++ (sutures overlapped but reducible), +++ (sutures overlapped and not reducible).	**Alert: +++**	▪ If moulding = +++, alert a senior health worker and follow local protocols. ▪ If moulding = 0 to ++, usually signs of normality (mainly if ++ is developed in the later stages of labour), reassess during next vaginal examination in 4 hours, unless otherwise indicated.

How to complete Section 4: Assess well-being of the woman

	Step 1: Assess	Step 2: Record	Step 3: Check the threshold	Step 4: Plan
Pulse	Count the woman's pulse rate for at least one full minute.	Record woman's pulse (bpm).	**Alert: <60, ≥120**	▪ If pulse <60 or ≥120 bpm, alert a senior health worker and follow local guidelines. ▪ If pulse is ≥60 and <120 bpm, assess pulse rate every 4 hours.
Systolic BP	Measure blood pressure in a sitting position or lying on her left side (check BP in the inferior arm).	Record woman's systolic blood pressure (SBP) in mmHg.	**Alert: <80, ≥140**	▪ If SBP is <80 or ≥140, alert a senior health worker and follow local guidelines. ▪ If SBP is ≥80 and <140, assess SBP every 4 hours.
Diastolic BP		Record woman's diastolic blood pressure (DBP) in mmHg.	**Alert: ≥90**	▪ If DBP = ≥90, alert a senior health worker and follow local guidelines. ▪ If DBP <90, assess DPB every 4 hours.
Temperature	Measure axillary temperature.	Record woman's temperature in degrees Celsius.	**Alert: <35.0** **≥ 37.5**	▪ If temperature is <35.0 or ≥37.5, alert a senior health worker and follow local guidelines. ▪ If the temperature is between 35.5 and 37 degrees, assess the temperature every 4 hours.
Uterine tenderness	When assessing uterine contractions, assess for uterine tenderness.	Record findings as NT = non-tender uterus, TU = tender uterus	**Alert: TU = Tender uterus**	▪ If there is uterine tenderness, assess for other signs of infection and consult a senior health worker. ▪ If the uterus is not tender, plan to check for uterine tenderness when checking for contractions every 60 minutes during latent phase, every 30 minutes during active phase, and every 15 minutes during the second stage
Urine	Check protein and acetone in urine with a reagent strip.	Record readings of protein (P) and acetone (A) as Negative, Trace, +, ++, +++, ++++.	**Alert: P++, A++**	▪ If P++, A++, or more, interpret measurements in the context of a complete clinical examination. Alert a senior health worker and follow local guidelines. ▪ If P = Negative, Trace or +, assess every 4 hours or each time the woman voids during labour.

How to complete Section 5: Assess labour status

	Step 1: Assess	Step 2: Record	Step 3: Check the threshold	Step 4: Plan
Contractions per 10 min	Count the number of uterine contractions over 10 minutes.	Record the absolute number of contractions in the cell that matches the time it is assessed.	**Alert: >5** **NOTE:** If the woman is receiving nifedipine or is being treated for a possible cause of PTL (e.g. UTI, STI, malaria, pyelonephritis), a reduction in the number of contractions is a sign that nifedipine and/or the treatment is being effective in delaying birth.	▪ If contractions are ≥5 per 10 minutes, verify the number of contractions over another 10 minutes. If the frequency is confirmed, alert a senior health worker and follow clinical guidelines. ▪ If contractions are less than 5 per 10 minutes, record uterine contractions every 60 minutes during latent phase, every 30 minutes during active phase, and every 15 minutes during the second stage.
Duration of contractions	Assess the duration of contractions.	Record duration of contraction in seconds in the cell that matches the time it is assessed.	**Alert: >60** **NOTE:** If the woman is receiving nifedipine or is being treated for a possible cause of PTL (e.g. UTI, STI, malaria, pyelonephritis), a reduction in the duration of contractions is a sign that nifedipine and/or the treatment is being effective in delaying birth.	▪ If contractions last ≥60 seconds, verify the number of contractions over another 10 minutes. If the duration is confirmed, alert a senior health worker and follow local clinical guidelines. ▪ If the duration of contractions is ≤60 seconds, record contractions every 60 minutes during latent phase, every 30 minutes during active phase, and every 15 minutes during the second stage.
Descent	Assess descent by abdominal palpation; refer to the part of the head (divided into five parts) palpable above the symphysis pubis.	Record "5/5, 4/5, 3/5, 2/5, 1/5, and 0/5" in the cell that matches the time you assessed descent.	There are no reference thresholds for descent.	▪ During the first stage, assess descent every 4 hours, unless otherwise indicated. ▪ During the second stage, consider the woman's behaviour, the effectiveness of pushing, and the baby's position and well-being when deciding the timing of a descent assessment.
Cervix	When performing vaginal examination (VE) to assess other clinical parameters, assess cervical dilatation.	In the first stage of labour, record the cervical dilatation in centimetres in the cell that matches the time you perform a vaginal examination. In the second stage, insert "P" to indicate when pushing begins.	**Alert values for the first stage: 8-10cm and imminent birth** **Alert value for the second stage:** Birth is not completed by **≥3h** from the start of the active second stage in nulliparous OR **≥2h** in multiparous women) [Note: senior health workers may feel the need to allow for longer time if GA <28 weeks]	▪ Alert neonatal health workers when cervical dilatation has reached 8-10 cm to prepare for a preterm newborn. ▪ During the first stage, ***only perform a VE if it will provide information that will assist with managing her care*** (not more frequently than 4 hours unless indicated). ▪ When performing a vaginal examination less than 4 hours after the previous assessment, ensure that the examination will add important information to the decision-making process.
If there are 2 or fewer contractions/10 min OR contractions last less than 20 seconds, ***consider extending the frequency of assessing cervical dilatation to more than every 4 hours or alerting a senior health worker***. If there is a ***decrease in the number of uterine contractions in 10 minutes and improvements in cervical status***, alert a senior health worker to plan for where the woman should be monitored – on the labour ward or the antenatal ward.				

How to complete Section 6: Medications:

	Step 1: Assess	Step 2: Record
Dexamethasone Betamethasone	Is the woman receiving dexamethasone or betamethasone? If so, circle the ACS she is receiving.	▪ If she is not receiving an ASC, record **N = No** ▪ If she was offered an ACS but declined, record **D = Declined** ▪ If she is receiving an ACS but a dose is not due, record **ND** = **Not Due** ▪ If she is receiving an ACS and a dose is due, record the time, dose, and route of administration in the cell that matches the time period during which it is administered
Nifedipine	Is the woman receiving nifedipine?	▪ If she is not receiving nifedipine, record **N = No** ▪ If she was offered nifedipine but declined, record **D = Declined** ▪ If she is receiving nifedipine but a dose is not due, record **ND** = **Not Due** ▪ If she is receiving nifedipine and a dose is due, record the time, dose and route of administration in the cell that matches the time period during which it is administered
Antibiotics	Is the woman receiving prophylactic antibiotics or antibiotics to treat an infection?	▪ If she is not receiving antibiotics, record **N = No** ▪ If she was offered an antibiotic but declined, record **D = Declined** ▪ If she is receiving an antibiotic but a dose is not due, record **ND** = **Not Due** ▪ If she is receiving antibiotics and a dose is due, record the name, time, dose, and route of administration in the cell that matches the time period during which it is administered
$MgSO_4$	Is the woman receiving $MgSO_4$ for neuroprotection or treatment of SPE/E?	▪ If she is not receiving $MgSO_4$, record **N = No** ▪ If she was offered $MgSO_4$ but declined, record **D = Declined** ▪ If she is receiving $MgSO_4$ by IV, record the dose and route of administration in the cell that matches the time it is administered ▪ If she is receiving $MgSO_4$ by IM injection but a dose not due, record **ND** = **Not Due** ▪ If she is receiving $MgSO_4$ by IM injection and a dose is due, record the time, dose and route of administration in the cell that matches the time period during which it is administered
Other medicine(s)	Is the woman receiving any other medication(s)?	▪ If no other medication is being administered, record N = No. ▪ If she is receiving other medicines, record the name, time, dose, and route of administration of any additional medication administered in the cell that matches the time period during which it is administered it is administered (e.g., 50 mg pethidine, intramuscular (IM)).
IV fluid	Is the woman on IV fluids?	Record: **Y = Yes** / **N = No**

How to complete Section 7: Shared decision-making

	Record
Assessment	▪ Record the overall assessment and any additional findings not previously documented but important for labour monitoring and management of PTL. For example: – Maternal infection – Maternal/fetal distress – Labour progressing / uterine contractions decreasing.
Plan	▪ Each time a clinical assessment of supportive care, the woman's and baby's well-being, and labour status is completed, share findings, assessment, and options for care with the woman and her companion. Take into consideration that women should be involved in discussions and be allowed to make informed decisions. ▪ Record the plan based on the shared decision. For example: "continue routine monitoring"; "consult a senior health worker"; "transfer to antenatal ward"; "alert the neonatal team"; "prepare for PTB"
Initials	▪ Remember to record your initials every time you have recorded the assessment and plan of care.

How to complete Section 1: Additional pages

Variable	Step 1: Assess	Step 2: Record
Date		▪ Record the date on which the parameters for the LCG for PTL being completed are assessed and recorded. This is important if labour is stopped and additional pages are used if labour restarts.
Page number	How many pages of the LCG for PTL have been completed? When did the woman give birth?	▪ Record the page number for the LCG for PTL being completed. For example: ▪ If labour restarts 48 hours after the original LCG for PTL was stopped, record the page number(s) for each subsequent page, e.g. “Page 2/_”, "Page 3/__". ▪ When the woman has given birth, complete the total number of pages filled in, e.g. "Page 2/2", "Page 3/3".
Name		▪ Record the woman’s full name and verify that it matches the name on her medical record. ▪ If part of a study, match the woman’s name to her PID
Ruptured membranes	On what date and at what time were amniotic membranes ruptured?	▪ Date and time [hh: mm using the 24-hour clock system] that rupture of membranes occurred. ▪ Record “U” or “unknown” if rupture of membranes is confirmed and the woman cannot report the date and/or time, and there is no documentation in the medical record.
PTL labour diagnosis	On what date and at what time was PTL diagnosed?	▪ Date and time PTL was diagnosed. ▪ Use local format to record dates (e.g. dd/mm/yy, or mm/dd/yy, or dd/mm/yyyy).
Active labour onset	On what date was active first stage of labour (cervix dilated at 5 or more centimetres) diagnosed?	▪ Date and time of active labour diagnosis. ▪ Use local format to record dates (e.g. dd/mm/yy, or mm/dd/yy, or dd/mm/yyyy).
Gestational age	Review the gestational age recorded on page 1 of the LCG for PTL. Add any additional days to the gestational age recorded on page 1.	▪ Gestational age in weeks and days. If the woman's gestational age was 31+1 weeks on admission, labour stalled and restarted 2 days later, record "31+3 weeks".
Time last dose of medication(s) administered	Review previous LCGs for PTL and any monitoring tools used to identify medications administered and the date and time they were administered.	▪ Time and date of the last dose of medications that were administered to ensure that continued doses are given on time.
Time axis	Review previous LCGs for PTL and any monitoring tools used to calculate the number of hours the woman has been monitored.	▪ Number of hours the woman has been monitored. ▪ For example, if a woman was admitted at 18:30 on 10/05/2025, labour stopped, and restarted at 18:30 on 12/05/2025, begin the time axis at "49".

Case scenario 1 (Ms. Halima Diablo)

Instructions

1. Work in groups of 2-3. Read the information provided and fill in the LCG for PTL, using the Quick Guide in this Provider Guide to help you record each parameter.

Section	Quick Guide in this Provider Guide
Section 1: Identifying information and labour characteristics at admission	Pages 4-5
Section 2: Supportive care	Page 6
Section 3: Care of the baby	Pages 7-8
Section 4: Care of the woman	Page 9
Section 5: Labour progress	Page 10
Section 6: Medication	Page 11
Section 7: Shared decision-making	Page 11

2. Record findings from Ms. Halima's case on the LCG for PTL. Circle any "alert" findings with a red pen on the LCG for PTL.
3. Check if you have correctly filled in each section by comparing your work with Ms. Halima's completed LCG for PTL in this Provider Guide on page 33. [For your own learning, do not look at Ms. Halima's correctly completed LCG for PTL until you have attempted filling in her LCG for PTL.]

Information for Section 1: Identifying information

Examination on admission:

- **Date/Time:** 06:00, 20.04.2025
- **Reason for Admission:** Ms. Halima is a 28-year-old woman, gravida 4 para 3+0. Came to the health facility complaining of **r**egular uterine contractions that started at midnight and have been increasing in frequency and intensity. She denies any danger signs (history of convulsions/unconscious; vaginal bleeding; vaginal discharge of mucus, which may be clear, pink, or slightly bloody; foul smelling vaginal discharge; fever; severe abdominal pain; severe headache; visual disturbances; severe vomiting; difficulty breathing) and says she has had no leakage of fluid from her vagina.
- **Support Person:** Her sister accompanies her.
- **Maternal vital signs:** Blood pressure: 110/70 mmHg; Pulse: 90 bpm; Temperature: 36.8°C; Respiratory rate: 14 bpm
- **Obstetric history: She** has had three previous spontaneous vaginal births at term, all resulting in live infants. Her last birth was 18 months ago. There were no complications in her previous pregnancies or births.
- **Medical/social history:** She has no known chronic illnesses and takes no regular medications. She lives with her husband, who works as a farmer. They have a stable household income and good family support. She does not use tobacco or alcohol. She does not live in a region where malaria is endemic.
- **History of current pregnancy**: She initiated antenatal care at 20 weeks of this pregnancy and attended two ANC visits at the local health centre. There were no reported medical or obstetric complications during this pregnancy. HIV and syphilis tests were negative at the first visit. She was mildly anaemic in the second trimester (Hb 10.5 g/dL), but her last haemoglobin at 30 weeks was 11.0 g/dL. Her gestational age, confirmed by an early ultrasound conducted at 20 weeks (29 January 2025) and reported in her ANC records, is **31 weeks + 3 days**. She reported feeling fetal movements earlier in the morning
- **Ultrasound examination: Presentation/Position:** Complete breech; **Estimated fetal weight:** 1600 g; **Liquor volume:** Normal

- **Abdominal examination:**
    - **Uterine contractions:** 4/10 minutes, lasting approximately 30 seconds
    - **Fetal movement:** Reported by Ms. Halima and noted on examination
    - **Fetal heart rate:** 144 bpm, no decelerations
    - **Uterine tenderness:** No uterine tenderness noted
    - **Presentation:** Breech
    - **Descent:** Not able to be assessed due to breech
- **Cervical exam at admission:**
    - **Vaginal lesions or sores:** None noted
    - **Vaginal discharge:** Colourless, nonodorous
    - **Speculum examination**: No evidence of amniotic fluid leakage; membranes intact
    - **Vaginal examination:** Cervix 5 cm dilated, fully effaced; station not able to be assessed due to breech
- **Urine:** 250 mL voided at admission: trace protein; negative acetone, leucocytes, and nitrites

Medications and interventions at 06:30:

- **Dexamethasone** 6mg IM now, then repeat every 12 hours for a total of 4 doses
- **$MgSO_4$** IV 4 g over 20 minutes, then 1 g/hour (until birth or for 24 hours, whichever comes first)
- **Nifedipine** 20 mg (standard/immediate release) by mouth now, then 10mg by mouth every 6 hours for 48 hours
- **Pain relief**: Declining pharmacologic or mechanical pain relief measures
- **Oral fluids**: Drinking fruit juice

Information for Section 2: Supportive care

Date: 20.04.2025

Time	Companion	Pain relief	Fluid intake
06:00	Sister present	Declining pharmacologic or mechanical pain relief measures	Drinking fruit juice
07:00	Sister present	Back massage	Oral fluids, sips of water
08:00	Sister present	Declined	Oral fluids, 100 ml water
09:00	Sister present	None required	150 ml oral fluids
10:00	Her sister remains with her	She is managing pain and says she does not require any pain relief measures.	Ms. Halima is resting on her side. She is not eating or drinking.
11:00	Sister present	Breathing, back massage	Oral fluids, 100 ml
12:00	sister present	Breathing exercises	Oral fluids, 100 ml
13:00	sister present	Breathing exercises, back massage	Halima is resting but occasionally taking sips of fruit juice
14:00	Sister is providing support and helping with breathing exercises and back massage	Ms. Halima begins to vocalize with contractions. She is in a left lateral position.	Occasionally taking sips of fruit juice
15:00	Sister is providing support	Ms. Halima reports pressure and an urge to push and says she does not require any pain relief measures. She is now on hands and knees.	Occasionally taking sips of fruit juice

Information for Section 3: Assess well-being of baby

Date: 20.04.2025

Time	Baseline FHR	FHR deceleration	Amniotic fluid	Fetal position	Caput	Moulding
First stage						
06:00	144 bpm	No decelerations		Complete breech		
06:30	138 bpm	No decelerations				
07:00	140 bpm	No decelerations	Membranes intact			
07:30	140 bpm	No decelerations				
08:00	142 bpm	No decelerations	Membranes intact			
08:30	142 bpm	No decelerations				
09:00	140 bpm	No decelerations	Membranes intact			
09:30	138 bpm	No decelerations				
10:00	140 bpm	No decelerations	Membranes intact			
10:30	144 bpm	No decelerations				
11:00	146 bpm	No decelerations	Membranes intact			
11:30	140 bpm	No decelerations				
12:00	148 bpm	No decelerations	Membranes intact			
12:30	142 bpm	No decelerations				
13:00	138 bpm	No decelerations	Membranes intact			
13:30	138 bpm	No decelerations				
14:00	132 bpm	No decelerations	Membranes intact	Complete breech		
14:30	130 bpm	No decelerations				
15:00	126 bpm	Late decelerations noted intermittently	Ruptured spontaneously with clear fluid			
Second stage						
15:15	125 bpm	Late decelerations	Meconium 1+	Complete breech		
15:30	119 bpm	Late decelerations	Meconium 1+			

Information for Section 4: Assess well-being of the woman

Date: 20.04.2025

Time	Pulse	Systolic BP	Diastolic BP	Temperature	Uterine tenderness	Urine
06:00	90 bpm	110 mmHg	70 mmHg	36.8°C	Not tender	Trace protein; negative ketones, leucocytes, and nitrites
06:30					None	
07:00					None	
07:30					None	
08:00					None	
08:30					None	
09:00					None	
09:30					None	
10:00	92 bpm	108 mmHg	68 mmHg	37°C	None	200ml, protein +, acetone negative
10:30					None	
11:00					None	
11:30					None	

Time	Pulse	Systolic BP	Diastolic BP	Temperature	Uterine tenderness	Urine
12:00					None	
12:30					None	
13:00					None	
13:30					None	
14:00	88 bpm	112 mmHg	66 mmHg	36.9°C	None	300ml, 1+ protein, 1+ acetone
14:30					None	
15:00					None	
15:30					None	

Information for Section 5: Assess labour status

Resolution of signs/symptoms associated with PTL or is labour progressing?

Date: 20.04.2025

Time	Contractions/10 min	Duration of contractions	Cervix	Descent
First stage				
06:00	4	30 seconds	5 cm	
06:30	3	30 seconds		
07:00	3	30 seconds		
07:30	3	30 seconds		
08:00	3	35 seconds		
08:30	3	35 seconds		
09:00	3	35 seconds		
09:30	3	40 seconds		
10:00	4	40 seconds	7 cm	Station 0
10:30	4	40 seconds		
11:00	4	40 seconds		
11:30	4	40 seconds		
12:00	4	40 seconds		
12:30	4	40 seconds		
13:00	4	40 seconds		
13:30	5	45 seconds		
14:00	5	50 seconds	9 cm	Station +2
14:30	5	50 seconds		
15:00	5	50 seconds	10 cm	Station +4
Second stage				
15:15	5	50 seconds	Pushing	Station +4
15:30	5	50 seconds	Pushing	Station +5

Information for Section 6: Medications

1. Review orders for medications and findings on the LCG for PTL:
   - Are any medications due?
   - Does she need any medications or IV fluids to manage any identified problems or complications?
2. Fill in the section for medications for every hour.
3. Check what you have recorded against Ms. Halima's completed LCG for PTL on page 33 of this Provider Guide. Do you agree with what is recorded on Ms. Halima's completed LCG for PTL? If not, why not?

Information for Section 7: Shared decision-making

1. Review findings on the LCG for PTL:
   - What is your overall assessment of supportive care being provided, well-being of the baby, well-being of the woman, and labour status. Record your assessment for every hour.
   - What are options for care? Are any interventions needed?

   When you are deciding on the plan of care, refer to the Quick Guide in this Provider Guide for guidance on whether and what type of intervention is recommended.
2. Role play a discussion of findings and options for care and then record a plan of care for every hour.
3. Check what you have recorded against Ms. Halima's completed LCG for PTL on page 33 of this Provider Guide. Do you agree with what is recorded on Ms. Halima's completed LCG for PTL? If not, why not?

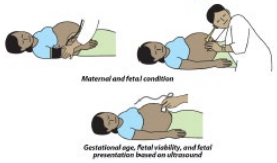
Childbirth

Date: 20.04.2025

15:35: Ms. Halima gives birth to a preterm male infant, breech vaginal birth

- Weight: Approx. 1650 g
- Resuscitation efforts provided by the neonatal team.
- Apgar scores: 3 at 1 min, 6 at 5 min
- Uterotonic medication administered within 1 minute after birth
- Cord clamped and cut 2 minutes after birth.
- Outcome: Neonate transferred to the NICU.
- Placenta: Delivered spontaneously, complete, no abnormalities noted
- Estimated blood loss: ~350 mL
- Perineum: Intact

Decide where the woman in PTL should be monitored and give birth



After a woman is admitted with suspected PTL:

- The woman and fetus will be stabilized and any urgent complications managed
- A comprehensive examination will be performed - general, abdominal, ultrasound, speculum, and vaginal (only after a speculum examination and if judged to be in first/second stage) assessment
- Any laboratory examinations conducted.

A digital vaginal examination should not be done when the cervix can be assessed with a speculum to diagnose preterm labour.

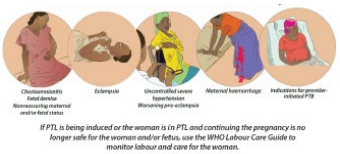
The examinations should:

- Confirm diagnosis of preterm labour: ***At least 6 regular uterine contractions/hour and at least one of the following: cervical dilatation of 3 or more cm and/or effacement of 75% or more. REMEMBER: At 0% effacement, cervical length is 4 cm; At 50% effacement, cervical length is 2 cm; At 75% effacement, cervical length is 1 cm; At 100% effacement, cervical length is 0 cm (fully thinned).***
- Confirm phase and stage of labour
- Confirm gestational age, fetal viability, and fetal presentation based on ultrasound
- Confirm status of membranes
- Identify maternal infection
- Identify medical/obstetric conditions that require management

Results of the examinations should determine:

- Eligibility for intervention to improve the survival of the preterm newborn - ACS, $MgSO_4$, nifedipine, and prophylactic antibiotics
- Safety to prolong pregnancy Interventions to manage medical/obstetric conditions
- Appropriate level of care where the woman should be monitored and give birth:
  - If it is not safe for the woman and/or fetus to prolong pregnancy, the woman should be monitored using the LCG at a CEmONC facility.
  - In general, if it is safe for the woman and fetus to prolong pregnancy and PTL is confirmed, the woman should be monitored using the LCG for PTL at a CEmONC facility with facilities to care for a preterm newborn.
  - If the woman is in a lower-level facility AND it is safe for the woman and fetus to prolong pregnancy AND intrauterine referral is not possible OR the facility is able to provide preterm care for late preterm newborns (34-37 weeks) and the need for advanced neonatal care is considered unlikely, the woman should be monitored using the LCG for PTL if PTL is confirmed.

Recognize when prolonging labour is unsafe for the woman and/or baby



If the following are diagnosed, do not prolong the pregnancy as it is not safe for the woman and/or fetus:

- Eclampsia / Worsening pre-eclampsia
- Uncontrolled severe hypertension
- Maternal haemorrhage
- Intra-amniotic infection (chorioamnionitis)
- Fetal demise
- Non-reassuring maternal and/or fetal status

Offer medications to improve outcomes for preterm newborns. If the fetus is alive and there are no contraindications, offer medications to improve newborn outcomes based on gestational age, eligibility criteria, and informed consent:

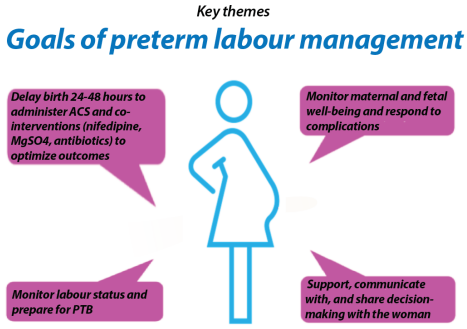
- <32+0 weeks: Offer $MgSO_4$ + an ACS IF no maternal infection (dexamethasone or betamethasone) + prophylactic antibiotics IF PPROM
- <34+0 weeks: Offer an ACS IF no maternal infection (dexamethasone or betamethasone) + prophylactic antibiotics IF PPROM
- ≥34+0 weeks but <37+0 weeks: If PPROM, offer prophylactic antibiotics

Offer other medications as needed: IV fluids, treatment as per protocols for identified infection(s), SPE/E, APH, unstable hypertension

Monitor supportive care, the well-being of the baby and woman, and labour progress

- Provide close monitoring of the woman using the labour monitoring tool and the LCG per protocols.
- Pay special attention to identifying presentation, signs of infection and need for antibiotics, and non-reassuring fetal and maternal status
- Provide timely referral if caesarean is indicated and the facility does not have operative capacity
- Alert the neonatal team to prepare for PTB

Goals of preterm labour management



A woman diagnosed with PTL may:

- Have no identifiable cause of PTL
- Have risk factors that increased her risk of PTL
- Be under treatment for an underlying cause of PTL (e.g. pyelonephritis or urinary tract infection or malaria or sexually transmitted infections).

The overall goals of managing PTL are to:

- Delay birth by 24-48 hrs to administer ACS and if <32 weeks also MgSO4, to optimize outcomes
- Delay birth until the woman can reach a higher level facility by administering nifedipine, where appropriate
- Monitor maternal and fetal well-being and respond to complications
- Monitor labour status and prepare for PTB
- Support, communicate with, and share decision-making with the woman and companion

The LCG for PTL is intended as a guide and is not a substitute for good clinical judgment. Decisions should not be based on findings from individual observations but rather on an overall assessment of the woman and her baby.

It is important that health workers adapt the monitoring frequencies based on interpretation of the results of observations on supportive care, labour status, and well-being of the woman and her baby.

NOTE: If an assessment is not accurate or health workers document findings they have not assessed or are not confident assessing, the right care may not be given and changes in status may be missed.

NOTE: If first stage of labour lasts more than 12 hours or second stage lasts more than 3 hours, use the additional pages of the LCG for PTL to continue monitoring the woman. If labour has stopped, use monitoring tools in the facility to continue monitoring the woman on the antenatal ward.

Respectful care

All women have the right to respectful care. Experiencing preterm labour can be a daunting experience for the woman. She may have feelings of helplessness, anxiety, fear, guilt, and depression and may find it hard to express her feelings. It is the responsibility of the entire team to speak with the woman respectfully and put her at ease.

When a woman is experiencing PTL:

- Support women to have a companion they choose.
- Encourage the woman to express her feelings.
- Listen to her and her family and encourage them to express their concerns; try not to interrupt.
- Respect the woman's sense of privacy and modesty by closing the door or curtains.
- Let the woman know that you are listening carefully.
- Answer the woman's questions directly and calmly.
- Reassure her. Tell the woman and her family as much as you can about what is happening. Often a simple explanation of what is happening and what to expect can calm their fears and prepare them for what will happen next.
- Give honest and accurate answers about her situation. Do not hesitate to admit what you do not know. Maintaining trust matters more than appearing knowledgeable.
- Keep her and her companion informed about results, options for management of her labour, and what to expect.
- Make sure the woman and her companion understand the information you have provided and ask if they have any further questions.
- Include the woman in decisions about her and her baby's care.
- Where appropriate, encourage family members to also participate in decisions about care.

Universal rights of childbearing women

Everyone has the right to:

- freedom from harm and ill-treatment.
- information, informed consent, and respect for their choices and preferences, including companion of choice during maternity care and refusal of medical procedures.
- privacy and confidentiality.
- be treated with dignity and respect.
- equality, freedom from discrimination and equitable care.

Infection prevention

Infection prevention starts when a woman comes for care and continues up until the time she leaves the facility for home. Women in PTL, particularly if membranes are ruptured, and preterm newborns are at a higher risk of hospital-acquired infections. Infection prevention practices are therefore extremely important when caring for a woman in PTL and preterm newborns.

Handwashing is the single most effective way to prevent infection.

- Wash with soap and water for 40 - 60 seconds.
- If hands are not visibly soiled, rub hands for 20 - 30 seconds using an alcohol-based hand rub.
- Encourage women and families to wash hands.

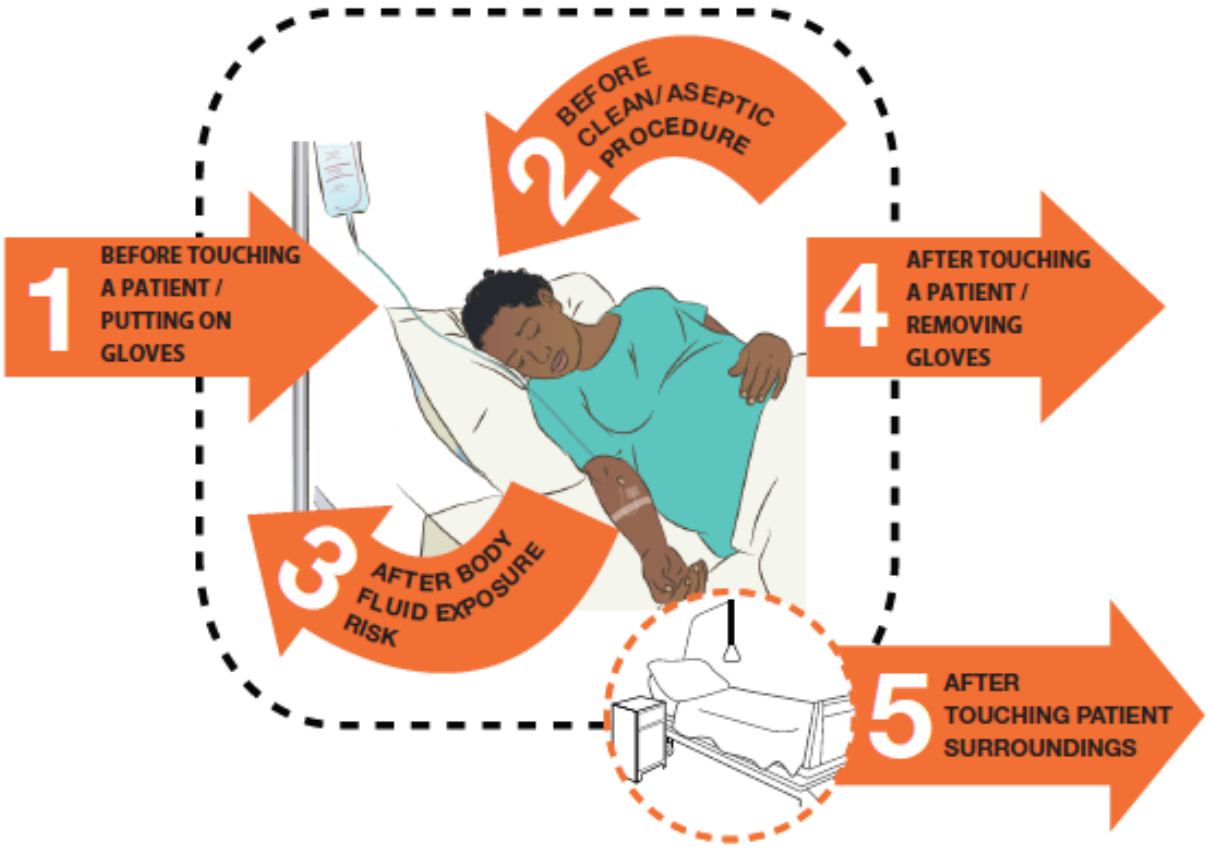
WHO's 5 moments for hand hygiene are:

1. Before touching clients / putting on gloves
2. Before "clean" / aseptic procedures
3. After exposure to body fluids
4. After touching clients / removing gloves
5. After contact with client surroundings

In addition:

- Wear appropriate personal protective equipment as per protocols: examination or sterile gloves, protective clothing, masks, respirators, and eye protection.
- Process reusable medical equipment/devices after use:
  - Remove gross soil and sharps at point of use to prepare instruments and equipment for transport to the decontamination and reprocessing area.
  - Transport contaminated equipment in clearly labelled, fully enclosed, leak and puncture-proof containers to the cleaning (dirty) area.
  - Keep instruments moist until cleaning.
  - Use a detergent solution compatible with the instrument/device and mechanical action to facilitate cleaning.
  - High- level disinfect (HLD) or sterilise instruments and equipment.
- Follow guidelines for safe injections and sharps injury prevention. Place sharps in puncture proof containers - do not recap needles!
- Carefully apply infection prevention practices when performing invasive procedures, e.g. taking blood samples, inserting IVs, providing IV fluids, giving injections, speculum and vaginal examinations, catheterization.
- Clean all surfaces with detergent and water between clients. Decontaminate visibly soiled surfaces and spills.
- Clean and disinfect patient care areas at least once a day, paying particular attention to frequently touched surfaces.
- Handle, process, and store linens safely.
- Separate non-contaminated and contaminated waste and dispose per standards.
- Bury placentas in deep pits or burn them per local standards.

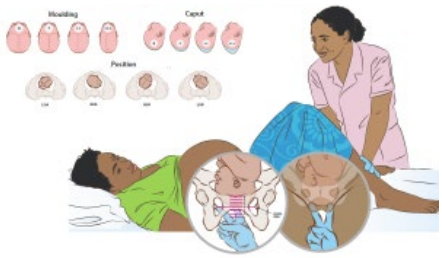
Your 5 Moments for Hand Hygiene



1	BEFORE TOUCHING A PATIENT / PUTTING ON GLOVES	WHEN?	Clean your hands before touching a patient and before putting on gloves.
		WHY?	To protect the patient against harmful germs carried on your hands. To prevent contamination of gloves by harmful germs carried on your hands.
2	BEFORE CLEAN/ ASEPTIC PROCEDURE	WHEN?	Clean your hands immediately before performing a clean/aseptic procedure.
		WHY?	To protect the patient against harmful germs, including the patient's own, from entering his/her body.
3	AFTER BODY FLUID EXPOSURE RISK	WHEN?	Clean your hands immediately after an exposure risk to body fluids (and after glove removal).
		WHY?	To protect yourself and the health-care environment from harmful patient germs.
4	AFTER TOUCHING A PATIENT / REMOVING GLOVES	WHEN?	Clean your hands after touching a patient and her/his immediate surroundings, when leaving the patient's side. Clean your hands immediately after removing gloves.
		WHY?	To protect yourself and the health-care environment from harmful patient germs. To prevent contamination of your hands by harmful germs carried on the gloves.
5	AFTER TOUCHING PATIENT SURROUNDINGS	WHEN?	Clean your hands after touching any object or furniture in the patient's immediate surroundings, when leaving – even if the patient has not been touched.
		WHY?	To protect yourself and the health-care environment from harmful patient germs.

Adapted from https://cdn.who.int/media/docs/default-source/integrated-health-services-(ihs)/infection-prevention-and-control/your-5-moments-for-hand-hygiene-poster.pdf?sfvrsn=83e2fb0e_21 for use with training materials developed for the WHO Implementation Research to Scale-up and Evaluate the Impact of Antenatal Corticosteroids on Preterm Newborn Outcomes (ACS-IR)

Vaginal examinations



Vaginal examinations (VEs) are performed to determine cervical dilatation and effacement, caput, and moulding, and to confirm fetal position, descent, and characteristics of amniotic fluid, if membranes are ruptured.

- Do NOT perform VEs if there is suspected or confirmed placenta praevia.
- VEs can increase the risk of infection:
  - always use aseptic technique.
  - clean the vulva with clean water before doing a VE.
  - only perform a VE if it will provide information that will assist with managing her care.
  - do not perform a VE more frequently than every 4 hours without a good reason when the woman is in labour.
  - avoid or limit VEs when membranes are ruptured.

Key best practices for VEs when monitoring a woman experiencing PTL

A sterile speculum examination is done on admission to assess the status of membranes, cervical length and dilatation and is key for preterm labour diagnosis. If cervical changes are confirmed, she will be admitted to the labour room

- VE should only be done if labour is established or birth is imminent.
- Limit VEs unless there are clear indications and results will assist with managing the woman's care.
- If the woman is receiving nifedipine, do not perform VEs unless there are indications that birth is imminent or labour is progressing - e.g. there are regular uterine contractions OR contractions have restarted after stopping for a time OR contractions increased in frequency and duration.
- Perform a VE no more frequently than every 4 hours after admission if she has regular contractions (3-5 contractions in 10 minutes, each lasting ≥20) and labour is established.
- If there are 2 or fewer contractions/10 min OR contractions last less than 20 seconds, consider extending the frequency of assessing cervical dilatation to more than every 4 hours.

Key best practices for VEs:

- Communicate and be respectful before and during the VE.
- Be sure the woman has emptied her bladder before performing a VE.
- Always obtain the woman's consent before the examination.
- Ensure privacy during the VE.
- Do not do a VE during a contraction. Stop the VE if she has a contraction.
- Wash hands, put on clean examination gloves, and use clean technique to wash the labia with water. Look for lesions, bleeding, discharge, amniotic fluid before starting the VE.
- Remove and dispose of gloves, wash hands and put on sterile gloves.
- Ask her to relax her legs. Never force her legs apart!
- Assess all parameters that require a vaginal examination at the same time.
- Watch how the woman is coping during the VE and respond appropriately.
- Remove and dispose of gloves.
- Inform the woman of findings and record on the LCG for PTL.

Supportive care

Encourage the woman and help her companion to give labour support. Offer reassurance and explain what to expect. Help her to:

- Find positions that are comfortable and keep her off her back
- Move and change position as desired
- Drink water, tea, or juices - at least 1 cup per hour
- Eat light food when hungry
- Keep bladder empty
- Express her feelings
- Ask for pain relief measures
- Participate in decisions about her care
- Give comfort.

You and her companion can:

- Provide strategies to help her cope
- Sponge her with cool or warm water.
- Help her shower.
- Help her find different positions for comfort.
- Offer light food and drinks.
- Offer massage.
- Fan her to keep her cool.
- Ensure she is not left alone.
- Offer pain management options

Avoid interventions that are not clinically indicated or potentially harmful - such as routine vaginal examinations, vaginal cleansing with chlorhexidine, perineal shaving, and enemas.

Fetal heart decelerations

Check fetal heart rate (FHR) for a full minute during a contraction and for 30-60 seconds after the contraction ends to decide:

1. When the FHR begins to decrease in relation to the contraction
2. When the FHR returns to baseline in relation to the contraction

A normal fetal heart rate (110-159 bpm) may slow during a contraction but usually recovers to normal as soon as the uterus relaxes.

Very slow FHR (<110 bpm) in the absence of contractions or persisting after contractions is suggestive of fetal distress.

A rapid fetal heart rate (≥160 bpm) may be a response to maternal fever, drugs causing rapid maternal heart rate, hypertension or amnionitis or could be normal for preterms. Have a senior provider interpret.

In preterm fetuses, it is reassuring and indicates that the baby is coping well with labour if FHR is normal and there are no decelerations. However, an abnormal FHR with or without decelerations does not necessarily indicate that fetal hypoxia or acidosis is present.

There are three types of decelerations:

- ***Early decelerations***: The FHR lowers below baseline usually at the start of a contraction, reaches the lowest point (nadir) at the peak of the contraction, and then increases after the peak of a contraction.
- ***Variable decelerations***: The timing of low FHR and return to baseline in relation to the contraction is variable. Variable decelerations are classified as severe when they last more than 60 seconds, fall below 70 beats/min, or have a drop of 60 beats/min below the baseline rate.
- ***Late decelerations***: The FHR lowers below baseline usually after the peak of a contraction. These decelerations are associated with a greater degree of relative hypoxemia.

Shared decision-making

Section 7, Shared decision-making, aims to facilitate continuous communication with the woman and her companion and consistent recording of all assessments, plans of care agreed upon, and initials of the health worker.

Shared decision-making is the process of applying person-centred communication, deliberation, and decision-making to ensure a woman receives the best, individualized care.

To enable shared decision-making:

- Ensure effective communication between maternity health workers and women in labour.
- Take into consideration a woman's values, preferences, fears and concerns regarding her hoped-for birth experience.
- Use appropriate language, and culturally appropriate terminology, taking into consideration the woman's and her companion's language, health literacy, education level and familiarity with the physiology of pregnancy and birth.
- Give clear, simple explanations of findings of physical examinations and their implications.
- Give clear explanations of a full array of care options, and unbiased explanation of potential benefits or risks for the woman and the baby.
- Give ample time for the woman to ask questions.
- Come to agreement on the plan of care and obtain informed consent.

Women say they have a positive experience, regardless of outcome if they:

- feel free to make their own choices, even when things do not happen as they expect
- feel safe and cared for
- feel connected to health workers, family and their babies
- feel they are being treated with respect
- understand what happened
- understand that they could not fully control what happened and that complications are not their fault

Involve the woman, family, health workers involved in care of the woman (obstetrician, midwife, nurses, matron) and the team involved in care of the preterm newborn (NICU staff, neonatologists, paediatricians, nurse in charge) when making decisions about care.

Exercise 1: Ms. Beena

Review Ms. Beena's completed LCG for PTL and respond to following questions.

1. What is your general impression about care provided? Was Ms. Beena monitored per protocols? If not, how should she have been monitored?

2. What is your general impression about documentation on the LCG? How could documentation be improved?

3. Were all the appropriate interventions to improve a preterm newborn's outcomes offered? If not, what other options should health workers have offered Ms. Beena?

4. Do you agree with the assessments made? If not, what assessments would you record for Ms. Beena?

5. Do you agree with the care plan recorded? How could you improve the care provided to Ms. Beena?

LABOUR CARE GUIDE FOR PTL

Date: 15 / 05 / 2025 **Page:** 1/___

Name: Beena **PID:** _____ **Parity:** 3

Gestational age: 31 **wks +** 3 **days**

Confirmed by ultrasound on - Date: 20 / 09 / 24

Ruptured membranes [Date: 15 / 05 / 25 **Time:** 15 : 00]

Risk factors for PTL: Previous PTB, obesity

PTL diagnosis - Date: 15 / 05 / 25 **Time:** 17 : 30

Active labour onset - Date: 15 / 05 / 25 **Time:** 17 : 30

Results of initial examination [Date: 15 / 05 / 25 **; Time** 17 : 00 **]: Temperature** 37.2 **°C / Pulse** 68 **bpm / Respirations** 12 **/min / BP** 122 / 76 **mmHg; Ruptured membranes - confirmed /not confirmed; Cervical length:** _____ **cm / Cervical effacement:** 100 **% / Cervical dilatation:** 5 **cm;** 2-3 **contractions/10 min; Medications administered at admission:** dexamethasone 6mg IM at 17:30

Medications prescribed on admission: _____

	Time		17 : 30	18 : 30	19 : 30	20 : 30	:	:	:	:	:	:	:	:	21 : 00	22 : 05	:	
	Hours		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
	ALERT		←				FIRST STAGE							→	←		SECOND STAGE	→
SUPPORTIVE CARE	Companion	N	Y	Y	Y										Y	Spontaneous vaginal birth of 1.800 kg baby girl at 22:05.		
	Pain relief	N	D	Y	D										D			
	Oral fluid	N	Y	Y	Y										Y	Baby girl died at 00:15 on 16/05/25.		
BABY	Baseline FHR	<110, ≥160	140	132	124	118												
	FHR deceleration	L																
	Amniotic fluid	M+++, B, P	C			C												
	Fetal position	OP, OT, B,TL	(B)			(B)												
	Caput	+++																
	Moulding	+++																
WOMAN	Pulse	<60, ≥120	68												82			
	Systolic BP	<80, ≥140	122												136			
	Diastolic BP	≥90	76												78			
	Temperature °C	<35.0, ≥ 37.5	37.2												36.8			
	Uterine tenderness	TU	NT			NT									NT			
	Urine	P++, A++	P+ / A+															
LABOUR STATUS	Contractions per 10 min	>5	2-3			4									4			
	Duration of contractions	>60	30			40									40			
	Cervix [Record cm]	8-10	5			(10)									P			
	Descent [Record __/5]																	
MEDICATION	(Dexamethasone) Betamethasone		17:30: 6mg IM	ND	ND	ND									ND			
	Nifedipine		N	N	N	N									N			
	Antibiotics		N	N	N	N									N			
	$MgSO_4$		N	N	N	N									N			
	Other medicine(s)		N	N	N	N									N			
	IV fluids		N	N	N	N									N			
SHARED DECISION-MAKING	ASSESSMENT		Breech presentation. Other findings within normal limits.			Urge to push at 21:00. In second stage												
	PLAN		Consult senior doctor re. breech presentation. Monitor per protocols.	Monitor per protocols.		Alert neonatal team.												
	INITIALS		IG	IG		IG									IG			

INSTRUCTIONS: CIRCLE ANY OBSERVATION MEETING THE CRITERIA IN THE 'ALERT' COLUMN, ALERT THE SENIOR MIDWIFE OR DOCTOR AND RECORD THE ASSESSMENT AND ACTION TAKEN. IF LABOUR EXTENDS BEYOND 12H, PLEASE CONTINUE ON A NEW LABOUR CARE GUIDE FOR PTL. Abbreviations: **Y** – Yes, **N** – No, **D** – Declined, **U** – Unknown, **E** – Early, **L** – Late, **V** – Variable, **I** – Intact, **C** – Clear, **M** – Meconium, **B** – Blood, **P** - Purulent, **OA** – Occiput Anterior, **OP** – Occiput Posterior, **OT** – Occiput Transverse, **B** - Breech, **TL** - Transverse lie, **NT** = Non-tender uterus, **TU** - Tender uterus, **P+** – Protein, **A+** – Acetone, **ND** - Not Due

Exercise 2: Ms. Etsub

1. Work in groups of 2-3. Read the information provided and fill in the LCG for PTL, using the Quick Guide in this Provider Guide to guide you on how to record each parameter.

Section	Quick Guide in this Provider Guide
Section 1: Identifying information and labour characteristics at admission	Pages 4-5
Section 2: Supportive care	Page 6
Section 3: Care of the baby	Pages 7-8
Section 4: Care of the woman	Page 9
Section 5: Labour progress	Page 10
Section 6: Medication	Page 11
Section 7: Shared decision-making	Page 11

2. Record findings from Ms. Etsub's case on the LCG for PTL. Circle any "alert" findings with a red pen on the LCG for PTL.
3. When you are deciding on medications, review orders for medications and findings from your assessment to decide if a medication or IV fluids are required.
4. Record your assessment.
5. When you are deciding on the plan of care, refer to the Quick Guide in this Provider Guide for guidance on whether and what type of intervention is recommended.
6. Check if you have correctly filled in each section by comparing your work with Ms. Etsub's completed LCG for PTL on pages 35-36 in this Provider Guide. [For your own learning, do not look at Ms. Halima's correctly completed LCG for PTL until you have attempted filling in her LCG for PTL.]

Examination on admission:

- **Date/Time:** 18:30, 10.05.2025
- **Reason for Admission:** Ms. Etsub is a 27-year-old woman. Gravida 2, Para 1+0**.** Came to the health facility complaining of painful, regular uterine contractions for the past 2 hours. She denies any danger signs (history of convulsions/unconscious; vaginal bleeding; vaginal discharge of mucus, which may be clear, pink, or slightly bloody; foul smelling vaginal discharge; fever; severe abdominal pain; severe headache; visual disturbances; severe vomiting; difficulty breathing) and says she has had no leakage of fluid from her vagina.
- **Support Person:** Her husband accompanies her.
- **Maternal vital signs:** Blood pressure: 122/78 mmHg; Pulse: 86 bpm; Temperature: 36.7°C; Respiratory rate: 18 bpm
- **Obstetric history:** Her previous pregnancy resulted in a spontaneous vaginal birth of a healthy baby at 40 weeks. That birth occurred two years ago. There were no complications in her previous pregnancy or birth.
- **Medical/social history:** She has no known chronic illnesses and takes no regular medications. She lives with her husband and young son. Her husband is a government clerk. They have a stable household income and good family support. She does not use tobacco or alcohol. She does not live in a region where malaria is endemic.
- **History of current pregnancy**: She began antenatal care for this pregnancy at 12 weeks at a local health centre in rural Ethiopia and has had three ANC contacts so far. Her LMP was on 27 September 2024. This pregnancy has been uncomplicated. She tested negative for HIV and syphilis. Her haemoglobin at 30 weeks was 10.7 g/dL. Her gestational age, confirmed by a first trimester ultrasound conducted at 12 weeks (20 December 2024) and reported in her ANC records, is 32 weeks + 1 day. She reported feeling fetal movements earlier in the morning.
- **Ultrasound examination:**
    - **Presentation/Position:** Cephalic
    - **Estimated fetal weight:** 1900 g
    - **Liquor volume:** Normal

- **Abdominal examination:**
    - **Uterine contractions:** 4/10 minutes, lasting approximately 50 seconds
    - **Fetal movement:** Reported by Ms. Etsub and noted on examination
    - **Fetal heart rate:** 146 bpm, no decelerations
    - **Uterine tenderness:** No uterine tenderness noted
    - **Presentation:** Cephalic
    - **Descent:** 4/5 palpable
- **Cervical exam at admission:**
    - **Vaginal lesions or sores:** None noted
    - **Vaginal discharge:** Colourless, non-odorous
    - **Speculum examination**: No evidence of amniotic fluid leakage; membranes intact
    - **Vaginal examination:** Cervix 4 cm dilated, fully effaced; station -4; position occiput anterior
- **Urine:** 200 mL voided at admission: protein, ketones, leucocytes, and nitrites negative

Medications and Interventions at 19:00:

- **Dexamethasone** 6mg IM, then repeat every 12 hours for a total of 4 doses
- **Nifedipine** 20 mg (standard/immediate release) by mouth, then 10mg by mouth every 6 hours for 48 hours
- **Pain relief**: Declining pharmacologic or mechanical pain relief measures
- **Oral fluids**: Drinking fruit juice

Labour Progress and Monitoring:

Time	Findings
10.05.2025	
19:30	• **Companion:** Husband • **Pain relief:** None requested • **Fluid intake:** Fruit juice • **FHR:** 144 bpm, no decelerations • **Contractions:** 4/10 minutes, lasting approximately 45 seconds • **Uterine tenderness:** None • **Vaginal loss:** Clear mucus
20:30	• **Companion:** Husband • **Pain relief:** None requested • **Fluid intake:** None • **FHR:** 142 bpm, no decelerations • **Contractions:** 3/10 minutes, lasting approximately 45 seconds • **Uterine tenderness:** None • **Vaginal loss:** None
21:30	• **Companion:** Husband • **Pain relief:** None requested • **Fluid intake:** Sipping fruit juice • **FHR:** 140 bpm, no decelerations • **Contractions:** 2/10 min, irregular and lasting 30 seconds • **Uterine tenderness:** None • **Vaginal loss:** None • **Urine:** 300 mL voided at admission: protein and ketones negative

Time	Findings
22:30	• **Companion:** Husband • **Pain relief:** None requested • **Fluid intake:** Sipping warm tea • **Maternal vital signs:** BP 120/76 mmHg, Pulse 84, Temp 36.6°C • **FHR:** 138 bpm, no decelerations • **Contractions:** 1/10 minutes, lasting less than 20 seconds • **Uterine tenderness:** None • **Descent:** 4/5 • **Vaginal loss:** none **Note: Vaginal examination not performed due to reduction in uterine contractions and no change in descent. Ms. Etsub transferred to the antenatal ward for continued care, support, and monitoring. LCG for PTL stopped and findings recorded on antenatal inpatient medical records.**
11.05.2025	
01:00	• **Nifedipine** 10mg by mouth
02:30	• **Companion:** Husband • **Pain relief:** None • **Fluid intake:** Water, 100 ml • **FHR:** 142 bpm, no decelerations • **Contractions:** None • **Descent:** 4/5 • **Uterine tenderness:** None • **Vaginal loss:** None
06:30	• **Companion:** Husband • **Pain relief:** None • **Fluid intake:** None • **Maternal vital signs:** BP 120/67 mmHg, Pulse 88, Temp 36.4°C • **FHR:** 138 bpm, no decelerations • **Contractions:** None • **Descent:** 4/5 • **Uterine tenderness:** None • **Vaginal loss:** None
07:00	• **Dexamethasone** 6mg IM (#2) • **Nifedipine** 10mg by mouth
08:00	• Ms. Etsub reported having a regular bowel movement.
10:30	• **Companion:** Husband • **Pain relief:** None • **Fluid intake:** Fruit juice • **FHR:** 145 bpm, no decelerations • **Contractions:** None • **Descent:** 4/5 • **Uterine tenderness:** None • **Vaginal loss:** None
13:00	• **Nifedipine** 10mg by mouth
14:30	• **Companion:** Husband • **Pain relief:** None • **Fluid intake:** Water 100 ml • **Maternal vital signs:** BP 115/73 mmHg, Pulse 78, Temp 36.4°C • **FHR:** 138 bpm, no decelerations • **Contractions:** None • **Descent:** 4/5 • **Uterine tenderness:** None • **Vaginal loss:** None

Time	Findings
18:30	• **Companion:** Husband • **Pain relief:** None • **Fluid intake:** Warm tea • **FHR:** 140 bpm, no decelerations • **Contractions:** None • **Descent:** 4/5 • **Uterine tenderness:** None • **Vaginal loss:** None
19:00	• **Dexamethasone** 6mg IM (#3) • **Nifedipine** 10mg by mouth
22:30	• **Companion:** Husband • **Pain relief:** None • **Fluid intake:** Water, 100 ml • **Maternal vital signs:** BP 112/65 mmHg, Pulse 71, Temp 36.6°C • **FHR:** 155 bpm, no decelerations • **Contractions:** 2/10 minutes, each about 20 seconds • **Descent:** 4/5 • **Uterine tenderness:** None • **Vaginal loss:** Clear, minimal
12.05.2025	
01:00	• **Nifedipine** 10mg by mouth
02:30	• **Companion:** Husband • **Pain relief:** None • **Fluid intake:** Sips of water • **FHR:** 150 bpm, no decelerations • **Contractions:** 2/10 minutes, each lasting about 20 seconds • **Descent:** 4/5 • **Uterine tenderness:** None • **Vaginal loss:** Mucous-like, scant
06:30	• **Companion:** Husband • **Pain relief:** None • **Fluid intake:** Oral fluids, 150 ml • **Maternal vital signs:** BP 110/68 mmHg, Pulse 74, Temp 36.7°C • **FHR:** 148 bpm, no decelerations • **Contractions:** 2/10 minutes, each lasting about 30 seconds • **Descent:** 4/5 • **Uterine tenderness:** None • **Vaginal loss:** Clear
07:00	• **Dexamethasone** 6mg IM (#4) • **Nifedipine** 10mg by mouth
09:30	• Ms. Etsub reported having a regular bowel movement.
10:30	• **Companion:** Husband • **Pain relief:** None • **Fluid intake:** Oral fluids, 150 ml • **FHR:** 145 bpm, no decelerations • **Contractions:** 2/10 minutes, each lasting 30 seconds • **Descent:** 3/5 • **Uterine tenderness:** None • **Vaginal loss:** Mucoid with slight blood streak
13:00	• **Nifedipine** 10mg by mouth

Time	Findings
14:30	• **Companion:** Husband • **Pain relief:** None • **Fluid intake:** Light soup and oral fluids • **Maternal vital signs:** BP 108/66 mmHg, Pulse 76, Temp 36.8°C • **FHR:** 144 bpm, no decelerations • **Contractions:** 3/10 minutes each last 35 seconds • **Descent:** 3/5 • **Uterine tenderness:** None • **Vaginal loss:** None
18:30	• **Companion:** Husband • **Pain relief:** None requested • **Fluid intake:** Warm tea • **Maternal vital signs:** BP 112/68 mmHg, Pulse 78, Temp 37.2°C • **FHR:** 142 bpm, no decelerations • **Contractions:** 3 contractions/10 minutes, lasting 40 seconds • **Uterine tenderness:** None • **Vaginal loss:** Mucoid • **Descent:** 2/5 • **Cervix:** 6 cm • **Position:** OA • **Caput:** 0 • **Moulding:** 0 • **Urine:** 350 ml, protein and acetone negative **Ms. Etsub transferred to the labour ward in active labour. Nifedipine stopped**
19:00	• **FHR:** 140 bpm, no decelerations • **Contractions:** 3 contractions/10 minutes, lasting 40 seconds • **Uterine tenderness:** None
19:30	• **Companion:** Husband • **Pain relief:** Breathing exercises • **Fluid intake:** Sips of water • **FHR:** 143 bpm, no decelerations • **Contractions:** 3 contractions/10 minutes, lasting 40 seconds • **Uterine tenderness:** None • **Vaginal loss:** None
20:00	• **FHR:** 138 bpm, no decelerations • **Contractions:** 3 contractions/10 minutes, lasting 40 seconds • **Uterine tenderness:** None
20:30	• **Companion:** Husband • **Pain relief:** Massage • **Fluid intake:** Fruit juice sips • **FHR:** 148 bpm, no decelerations • **Contractions:** 4 contractions/10 minutes, lasting 40 seconds • **Uterine tenderness:** None • **Descent: 1/5** • **Vaginal loss:** Slightly blood-stained mucus
21:00	• **FHR:** 146 bpm, no decelerations • **Contractions:** 4/10 minutes, each lasting 45 seconds • **Uterine tenderness:** None
21:30	• **Companion:** Husband • **Pain relief:** Reassurance, breathing techniques • **Fluid intake:** None • **FHR:** 136 bpm, no decelerations • **Contractions:** 4/10 minutes, each lasting 50 seconds • **Uterine tenderness:** None • **Vaginal loss:** Slightly blood-stained mucus

Time	Findings
22:00	• **FHR:** 132 bpm, no decelerations • **Contractions:** 5/10 minutes, each lasting 50 seconds • **Uterine tenderness:** None
22:30	• **Companion:** Husband • **Pain relief:** Massage • **Fluid intake:** Fruit juice sips • **Maternal vital signs:** BP 122/72 mmHg, Pulse 88, Temp 37.1°C • **FHR:** 128 bpm, no decelerations • **Contractions:** 5/10 minutes, each lasting 50 seconds • **Uterine tenderness:** None • **Vaginal loss:** Blood-stained mucus • **Descent: 0/5** • **Cervix:** 10 cm • **Position: OA** • **Caput:** 0 • **Moulding:** 0 • **Urine:** 250 ml, protein negative and acetone 1+
22:45	• **FHR:** 131 bpm, no decelerations • **Contractions:** 5/10 minutes, each lasting 50 seconds • **Pushing:** Effective, spontaneous • **Amniotic fluid:** Membranes ruptured spontaneously, clear • **Descent:** 0
23:00	• **FHR:** 128 bpm, no decelerations • **Contractions:** 5/10 minutes, each lasting 50 seconds • **Pushing:** Active, guided • **Amniotic fluid:** Clear • **Descent:** 0
23:15	• **FHR:** 130 bpm, no decelerations • **Contractions:** 5/10 minutes, each lasting 50 seconds • **Pushing:** Sustained • **Amniotic fluid:** Clear • **Descent:** head visible at vaginal opening
23:20	• **Spontaneous vaginal birth** of a **live female infant** • **Gestational age:** 32+3 weeks • **Birthweight:** 1980 g • **Apgar scores:** 8 at 1 min, 9 at 5 min • Uterotonic given to Ms. Etsub within one minute after birth of the baby • Delayed cord clamping performed • Baby placed skin-to-skin with Ms. Etsub • Complete placenta delivered with controlled cord tractions • Intact perineum • Blood loss approximately 250ml • Exclusive breastfeeding initiated within the hour

Postpartum Course:

- BP stable, uterus well contracted
- No excessive bleeding or complications
- Emotionally well and relieved
- Receiving postpartum iron and multivitamins
- Discharged on **15.05.2025** with counselling on newborn care, breastfeeding, and family planning options

Newborn:

- Admitted to NICU for routine preterm observation
- No respiratory distress
- Maintained O_2 saturation on room air
- Fed with expressed breast milk via cup, transitioned to breastfeeding
- No signs of infection or jaundice
- Discharged with mother in good condition

Summary: Ms. Etsub presented in preterm labour at 32+1 weeks with intact membranes and regular contractions. She received a full course of dexamethasone and oral nifedipine tocolysis, successfully delaying labour for 48 hours. Labour resumed spontaneously, and she delivered a healthy female infant at 32+3 weeks by uncomplicated vaginal birth. Both mother and baby recovered well and were discharged together.

Case study answers

LABOUR CARE GUIDE FOR PTL

Date: 20 / 04 / 2025 Page: 1/ 1

Name: Halima   PID: ______   Parity: 3

Gestational age: 31 wks + 3 days
Confirmed by ultrasound on - Date: 29 / 01 / 2025

Ruptured membranes [Date: 20 / 04 / 2025 Time: 15 : 00]

Risk factors for PTL: None identified

PTL diagnosis - Date: 20 / 04 / 2025 Time: 06 : 00
Active labour onset - Date: 20 / 04 / 2025 Time: 06 : 00

Results of initial examination [Date: 20 / 04 / 25 ; Time 06 : 00]: Temperature 36.8 **°C / Pulse** 90 **bpm / Respirations** 14 **/min / BP** 110 / 70 **mmHg; Ruptured membranes - confirmed /not confirmed; Cervical length:** ____ **cm / Cervical effacement:** 100 **% / Cervical dilatation:** 5 **cm;** 4 **contractions/10 min; Medications administered at admission:** At 06:30 on 20/04/25: 1) Dexamethasone 6mg IM, 2) $MgSO_4$ IV 4g over 20 minutes, then 1g/hour IV, 3) Nifedipine 20mg (standard/immediate release) by mouth.

Medications prescribed on admission: 1) Dexamethasone 6mg IM now, then every 12 hours for a total of 4 doses; 2) $MgSO_4$ 4g IV over 20 minutes now, then 1g IV/hour (until birth or for 24 hours, whichever whichever comes first); 3) Nifedipine 20 mg (standard/immediate release) by mouth now, then 10mg by mouth every 6 hours for 48 hours

		ALERT	06 : 00	07 : 00	08 : 00	09 : 00	10 : 00	11 : 00	12 : 00	13 : 00	14 : 00	15 : 00	:	:	15 : 15	:	:
	Hours		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
			FIRST STAGE												SECOND STAGE		
SUPPORTIVE CARE	Companion	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y				15:35 - Spontaneous vaginal breech birth of live male infant 1650g	
	Pain relief	N	D	Y	D	D	D	Y	Y	Y	Y	D					
	Oral fluid	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y					
BABY	Baseline FHR	<110, ≥160	144 / 138	140 / 140	142 / 142	140 / 138	140 / 144	146 / 140	148 / 142	138 / 138	132 / 130	126			125 / 119		
	FHR deceleration	L	N / N	N / N	N / N	N / N	N / N	N / N	N / N	N / N	N / N	E			E / E		
	Amniotic fluid	M+++, B, P	I	I	I	I	I	I	I	I	I	C			M+		
	Fetal position	OP, OT, B,TL	B				B				B	B			B		
	Caput	+++															
	Moulding	+++															
WOMAN	Pulse	<60, ≥120	90				92				88						
	Systolic BP	<80, ≥140	110				108				112						
	Diastolic BP	≥90	70				68				66						
	Temperature °C	<35.0, ≥ 37.5	36.8				37				36.9						
	Uterine tenderness	TU	NT / NT	NT / NT	NT / NT	NT / NT	NT / NT	NT / NT	NT / NT	NT / NT	NT / NT	NT			NT		
	Urine	P++, A++	P trace / A neg				P + / A neg				P + / A +						
LABOUR STATUS	Contractions per 10 min	>5	4 / 3	3 / 3	3 / 3	3 / 3	4 / 4	4 / 4	4 / 4	4 / 5	5 / 5	5			5 / 5		
	Duration of contractions	>60	30 / 30	30 / 30	35 / 35	35 / 40	40 / 40	40 / 40	40 / 40	40 / 45	50 / 50	50			50 / 50		
	Cervix [Record cm]	8-10	5				7				9	10			P / P		
	Descent [Record __/5]						Station 0				Station +2	Station +4			+4 / +5		
MEDICATION	Dexamethasone Betamethasone		06:30: 6mg IM	ND	ND	ND	ND	ND	ND	ND	ND	ND			ND		
	Nifedipine		06:30: 20mg PO	ND	ND	ND	ND	ND	12:30: 10mg PO	ND	ND	ND			ND		
	Antibiotics		N	N	N	N	N	N	N	N	N	N			N		
	$MgSO_4$		06:30 4g IV; 06:50:1g/h IV	1g/h IV	1g/h IV	1g/h IV	1g/h IV	1g/h IV	1g/h IV	1g/h IV	1g/h IV	1g/h IV			1g/h IV		
	Other medicine(s)		N	N	N	N	N	N	N	N	N	N			N		
	IV fluids		N	N	N	N	N	N	N	N	N	N			N		
SHARED DECISION-MAKING	ASSESSMENT		Active labour. Complete breech. Maternal and fetal status reassuring.	No change in contractions. No signs of Mg toxicity. Fetal status reassuring.	Labour continues. No signs of Mg toxicity. Fetal status reassuring.	Labour continues. No signs of Mg toxicity. Fetal status reassuring.	Not eating or drinking. Maternal and fetal status reassuring.	Labour continues. No signs of Mg toxicity. Fetal status reassuring.	Labour continues. No signs of Mg toxicity. Fetal status reassuring.	Labour continues. No signs of Mg toxicity. Fetal status reassuring.	Vocalizing with contractions. Maternal and fetal status reassuring.	Urge to push. In 2nd stage. Late decelerations.			Descent with pushing. Late decelerations.		
	PLAN		Consult senior HW. Alert neonatal team. Monitor per protocols.	Continue monitoring.	Continue monitoring.	Continue monitoring.	Encourage food and fluid intake. Continue monitoring.	Continue monitoring.	Continue monitoring.	Continue monitoring.	Alert neonatal team. Continue monitoring.	Call senior HW. Prepare for PTB. Left side-lying position. O2 at 6L/min.			O2 at 6L/min. Continue monitoring.		
	INITIALS		FC	FC	FC	FC	FC	FC	FC	FC	FC	FC			FC		

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Responses to questions about Ms. Beena's completed LCG for PTL

1. **What is your general impression about care provided? Was Ms. Beena monitored per protocols? If not, how should she have been monitored?**
   - She was not monitored as per protocols:
     - When Ms. Beena was in active phase of first stage of labour, health workers should have monitored labour status and the well-being of the woman and baby as follows:
       - Half-hourly - Fetal heart rate /decelerations, uterine contractions /tenderness
       - Hourly - Companion, pain relief, oral fluid, vaginal loss (bleeding / foul-smelling discharge / liquor)
       - 4 hourly - Maternal vital signs, descent, fetal position (by abdominal examination) Only perform vaginal examination if critical to manage the woman's care
       - Each void - Proteinuria, acetonuria
     - When Ms. Beena was in second stage of labour, health workers should have monitored labour status and the well-being of the woman and baby as follows:
       - Every 5 minutes - Fetal heart rate /decelerations [record the most clinically significant value within the 15-minute time frame]
       - Every 15 minutes - Uterine contractions, pushing efforts
       - Half-hourly - Uterine tenderness, vaginal loss (bleeding / foul-smelling discharge / liquor), descent
       - Hourly - Companion, pain relief, oral fluid, fetal position, caput, moulding
       - 4 hourly - Maternal vital signs
       - Each void - Proteinuria, acetonuria
2. **What is your general impression about documentation on the LCG? How could documentation be improved?**
   - Documentation was incomplete.
   - Alert signs and the type of ACS were circled correctly, documentation of parameters assessed were correctly documented.
   - Assessments at 18:30 and 19:30 during first stage were not documented. No assessment during second stage was recorded.
   - There was no plan of care at 19:30 and during second stage.
   - Documentation for second stage should have started at 21:15
3. **Were all the appropriate interventions to improve a preterm newborn's outcomes offered? If not, what other options should health workers have offered Ms. Beena?**
   - Ms. Beena presented at 31+3 weeks pregnant and should have been offered an ACS, $MgSO_4$, and nifedipine.
4. **Do you agree with the assessments made? If not, what assessments would you record for Ms. Beena?**
   - Assessments were sporadic. From the few parameters recorded, it does not appear that Ms. Beena or her baby had any problems.
   - It is difficult to know because documentation was incomplete.
5. **Do you agree with the care plan recorded? How could you improve the care provided to Ms. Beena?**
   - It is difficult to know because documentation was incomplete.
   - The neonatal team should have been alerted when she was admitted in active labour.

LABOUR CARE GUIDE FOR PTL

Date: 10 / 05 / 2025 **Page:** 1/ 2

Name: Etsub **PID:** _____ **Parity:** 1

Gestational age: 32 **wks +** 1 **days**

Confirmed by ultrasound on - Date: 20/ 12 /2024

Ruptured membranes [Date: 12 / 05 /2025 **Time:** 22 : 45]

Risk factors for PTL: Haemoglobin 10.7g/dl at 30 weeks

PTL diagnosis - Date: 10 / 05 /2025 **Time:** 18 : 30

Active labour onset - Date: 12 / 05 /2025 **Time:** 18 : 30

Results of initial examination [Date: 10 / 05 /2025 **Time** 18 : 30 **]: Temperature** 36.7 **°C / Pulse** 86 **bpm / Respirations** 18 **/min / BP** 122 / 78 **mmHg; Ruptured membranes - confirmed /not confirmed; Cervical length:** _____ **cm / Cervical effacement:** 100 **% / Cervical dilatation:** 4 **cm;** 4 **contractions/10 min; Medications administered at admission:** At 19:00: 1) Dexamethasone 6mg IM and 2) Nifedipine 20 mg (standard/immediate release) by mouth.

Medications prescribed on admission: 1) Dexamethasone 6mg IM now, then repeat every 12 hours for a total of 4 doses; 2) Nifedipine 20 mg (standard/immediate release) by mouth now, then 10mg by mouth every 6 hours for 48 hours

	Time		18 : 30		19 : 30		20 : 30		21 : 30		22 : 30	:	:	:	:	:	:	:	:	:	:			
	Hours		1		2		3		4		5	6	7	8	9	10	11	12	1		2		3	
	ALERT		←									FIRST STAGE						→	←		SECOND STAGE		→	
SUPPORTIVE CARE	Companion	N	Y		Y		Y		Y		Y													
	Pain relief	N	D		D		D		D		D													
	Oral fluid	N	Y		Y		N		Y		Y													
BABY	Baseline FHR	<110, ≥160	146		144		142		140		138													
	FHR deceleration	L	N		N		N		N		N													
	Amniotic fluid	M+++, B, P	I		I		I		I		I													
	Fetal position	OP, OT, B,TL	OA																					
	Caput	+++																						
	Moulding	+++																						
WOMAN	Pulse	<60, ≥120	86								84													
	Systolic BP	<80, ≥140	122								120													
	Diastolic BP	≥90	78								76													
	Temperature °C	<35.0, ≥ 37.5	36.7								36.6													
	Uterine tenderness	TU	NT		NT		NT		NT		NT													
	Urine	P++, A++	P neg / A neg						P neg / A neg															
LABOUR STATUS	Contractions per 10 min	>5	4		4		3		2		1													
	Duration of contractions	>60	50		45		45		30		<20													
	Cervix [Record cm]	8-10	4																					
	Descent [Record __/5]		4								4													
MEDICATION	Dexamethasone Betamethasone		19:00: 6mg IM		ND		ND		ND		ND													
	Nifedipine		19:00: 20mg PO		ND		ND		ND		ND													
	Antibiotics		N		N		N		N		N													
	$MgSO_4$		N		N		N		N		N													
	Other medicine(s)		N		N		N		N		N													
	IV fluids		N		N		N		N		N													
SHARED DECISION-MAKING	ASSESSMENT		Latent phase of first stage. Maternal and fetal status reassuring.		No change in contractions. Fetal status reassuring.		Not eating or drinking. Fetal status reassuring.		Contractions decreasing in frequency and duration. Fetal status reassuring.		Labour stalled. Maternal and fetal status reassuring.													
	PLAN		Monitor per protocols.		Monitor per protocols.		Encourage food and fluid intake. Continue monitoring.		Monitor per protocols.		Transfer to antenatal ward for care, support and monitoring.													
	INITIALS		SE		SE		SE		SE		SE													

INSTRUCTIONS: CIRCLE ANY OBSERVATION MEETING THE CRITERIA IN THE 'ALERT' COLUMN, ALERT THE SENIOR MIDWIFE OR DOCTOR AND RECORD THE ASSESSMENT AND ACTION TAKEN. IF LABOUR EXTENDS BEYOND 12H, PLEASE CONTINUE ON A NEW LABOUR CARE GUIDE FOR PTL. Abbreviations: **Y –** Yes, **N –** No, **D –** Declined, **U –** Unknown, **E –** Early, **L –** Late, **V –** Variable, **I –** Intact, **C –** Clear, **M –** Meconium, **B** – Blood, **P** - Purulent, **OA –** Occiput Anterior, **OP –** Occiput Posterior, **OT –** Occiput Transverse, **B** - Breech, **TL** - Transverse lie, **NT** = Non-tender uterus, **TU** - Tender uterus, **P+** – Protein, **A+** – Acetone, **ND** - Not Due

ADDITIONAL PAGES FOR THE LABOUR CARE GUIDE FOR PTL

Date: 12 / 05 / 2025 **Page:** 2 / 2

Name: Etsub **PID:** _____

Ruptured membranes [Date: 12 / 05 / 2025 **Time:** 22 : 45]

Time last dose of medication(s) administered:
1) Dexamethasone 6mg IM (#4) at 07:00 on 12/05/25;
2) Nifedipine 10mg by mouth at 13:00 on 12/05/25 and discontinued at 18:30 on 12/05/25.

PTL diagnosis - Date: 10 / 05 /2025 **Time:** 18 : 30
Active labour onset - Date: 12 / 05 /2025 **Time:** 18 : 30
Gestational age: 32 **wks +** 3 **days**

	Time		18 : 30	19 : 30	20 : 30	21 : 30	22 : 30	:	:	:	:	:	:	:	22 : 45	:	:	
	Hours		49	50	51	52	☐	☐	☐	☐	☐	☐	☐	☐	1	2	3	
	ALERT		← FIRST STAGE →												← SECOND STAGE →			
SUPPORTIVE CARE	Companion	N	Y	Y	Y	Y	Y								Y	23:20 - Spontaneous vaginal birth of live female infant 1980g		
	Pain relief	N	D	Y	Y	Y	Y								Y			
	Oral fluid	N	Y	Y	Y	(N)	Y								Y			
BABY	Baseline FHR	<110, ≥160	142 | 140	143 | 138	148 | 146	136 | 132	128								131 | 128 | 130			
	FHR deceleration	L	N | N	N | N	N | N	N | N	N								N | N | N			
	Amniotic fluid	M+++, B, P	I	I	I	I	I								C	C		
	Fetal position	OP, OT, B,TL	OA				OA											
	Caput	+++	0				0											
	Moulding	+++	0				0											
WOMAN	Pulse	<60, ≥120	78				88											
	Systolic BP	<80, ≥140	112				122											
	Diastolic BP	≥90	68				72											
	Temperature °C	<35.0, ≥ 37.5	37.2				37.1											
	Uterine tenderness	TU	NT | NT	NT | NT	NT | NT	NT | NT	NT											
	Urine	P++, A++	P-, A-				P-, A+											
LABOUR STATUS	Contractions per 10 min	>5	3 | 3	3 | 3	4 | 4	4 | 5	5								5 | 5 | 5			
	Duration of contractions	>60	40 | 40	40 | 40	40 | 45	50 | 50	50								50 | 50 | 50			
	Cervix [Record cm]	8-10	6				10								P | P | P			
	Descent [Record __/5]		2		1		0								0			
MEDICATION	Dexamethasone Betamethasone		N	N	N	N	N								N			
	Nifedipine		N	N	N	N	N								N			
	Antibiotics		N	N	N	N	N								N			
	$MgSO_4$		N	N	N	N	N								N			
	Other medicine(s)		N	N	N	N	N								N			
	IV fluids		N	N	N	N	N								N			
SHARED DECISION-MAKING	ASSESSMENT		Active labour. Maternal and fetal status reassuring.	Fetal status reassuring.	Progressive descent. Fetal status reassuring.	Not eating or drinking. Fetal status reassuring.	In second stage. Maternal and fetal status reassuring.								Descent with pushing. Fetal status reassuring.			
	PLAN		Alert neonatal team. Monitor per protocols.	Continue monitoring.	Continue monitoring.	Encourage food and fluid intake. Continue monitoring.	Alert neonatal team. Prepare for PTB. Continue monitoring.								Continue monitoring.			
	INITIALS		EP	EP	EP	EP	EP								EP			

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