# L07: Preterm Labour

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## Introduction

A preterm birth occurs when a neonate is delivered between 20 and 37 weeks of gestation. It may or may not be preceded by preterm labour. Up to 80% of preterm births are spontaneous, resulting from preterm labor, or premature rupture of membranes (PROM). Rarely, incompetent cervix, or cervical insufficiency, can be responsible for a preterm birth. Other causes involve maternal or fetal issues that jeopardize the health of either (or both), such as pre-eclampsia, placenta previa, abruptio placentae (placental abruption), and fetal growth restrictions. The four main factors that lead to preterm labor are intrauterine infection, decidual hemorrhage, excessive uterine stretch, and maternal or fetal stress.

## Essentials

- The clinical findings that define true labour are the same regardless of whether the labour occurs at term or not. Signs and symptoms may be present for several hours:
  - Menstrual-like cramping
  - Mild, irregular contractions
  - Lower back ache
  - Pressure sensation in the vagina or pelvis
  - Vaginal discharge of mucus, which may be clear, pink, or slightly bloody (i.e., mucus plug, bloody show)
  - Spotting or light bleeding
- Preterm premature rupture of membranes (PPROM) presents a significant risk for preterm labour, but does not necessarily signify that delivery is imminent, though most pregnancies with PROM deliver within one week of rupture. Another common complication associated with PPROM is chorioamnionitis, an infection of the membrane and amniotic fluid. This poses a serious threat to both mother and neonate.
- Care for preterm neonates is challenging at best in the out-of-hospital field. An emphasis must be placed on maintaining warmth while attempting to properly assess the infant. Low APGAR scores are often expected for preterm infants.
- For interfacility transfers: Patients with pain or possible labour contractions should have prior documentation of: duration and severity of contractions; frequency of contractions; cervical dilation; progress of labour; and fetal fibronectin testing results if available. In general, interfacility transfers should not be initiated with patients presenting with cervical dilation greater than 4-6 cm. However, the decision to convey is based on labour progression, parity, obstetrical and history, gestational age, and conveyance time.

## Referral Information

- Any pregnant patient presenting with signs of preterm labour should be conveyed to the closest, most appropriate facility. The receiving centre should have NICU capabilities.
- Patients who are more than 34 weeks pregnant and in active labour will likely be admitted for delivery. Patients who are less than 34 weeks pregnant will likely receive care attempting to delay delivery.

## General Information

There is a high probability of malpresentation with preterm labour. Consider reviewing L08: Delivery Complications (breech, limb presentation, cord prolapse and shoulder dystocia).

## Interventions

### First Responder

- Provide position of comfort

- Keep patient warm and prevent heat loss
- Assess the patient - including vital signs and detailed pregnancy assessment
- Determine if birth is imminent
  - If birth is imminent, seek additional assistance urgently
  - Prepare for delivery and resuscitation
  - Position neonate carefully: keep neonate head midline and elevated 15 degrees

**Primary Care Paramedic – All FR and EMR interventions, plus:**

- Consider vascular access when appropriate
  - → D03: Vascular Access

**Critical Care Paramedic – All FR, EMR, PCP, and ACP interventions, plus:**

- Consider tocolytics
  - For patients in preterm labour, the goal is to avoid delivery during conveyance
  - Tocolytics should be strongly considered in order to minimize risk of delivery outside the hospital environment
  - Indomethacin or niFEDIPine can be considered for the tocolytic
- Sending facilities may have initiated some or all of the following:
  - Steroids if < 34 +6/7 weeks for lung maturation
  - Magnesium if < 33 +6/7 weeks for neuroprotection
  - Antibiotics for Group B Strep +ve patients

## References


1. Ambulance Victoria. Clinical Practice Guidelines: Ambulance and MICA Paramedics. 2018. [Link]
2. Lockwood CJ. Preterm labor: Clinical findings, diagnostic evaluation, and initial treatment. In UpToDate. 2020. [Link]
3. Robinson JN. Preterm birth: Risk factors, interventions for risk reduction, and maternal prognosis. In UpToDate. 2020. [Link]