

CLINICAL PRACTICE GUIDELINE FOR PREVENTION AND MANAGEMENT OF PRETERM LABOR

- **Title:** Clinical practice guideline for prevention and management of preterm labor.
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- **Abstract:**
 This clinical practice guideline (CPG) approaches the prevention and management of preterm labor in the Peruvian Social Security (EsSalud). To perform this CPG, a guideline task force (GTF) was formed with specialized physicians and methodologists, the group proposed 11 clinical questions. To answer each question, systematic searches in PubMed and GPC repositories were performed during August 2017 – February 2018, and the relevant evidence was selected. Certainty of evidence was evaluated using Grading of Recommendations Assessment, Development, and Evaluation (GRADE) methodology. In periodical work sessions, the GTF used GRADE methodology for reviewing the evidence and formulating recommendations. 20 recommendations (13 strong and 7 conditional), 24 good clinical practice items, one recommendation for implementation and one flowchart were formulated. The CPG was approved by Resolution N° 138-IETSI-ESSALUD-2018.
- **Key words:** preterm labor, Practice Guideline, GRADE Approach, Evidence-Based Medicine.
- **PICO questions for CPG:**

PREVENTION			
Question 1. In pregnant women at risk for PTL, should progesterone or cerclage be used as secondary prevention?			
POPULATION	DIAGNOSTIC TEST FOR INTERVENTION	COMPARATOR	OUTCOME(S)
Pregnant women at risk for PTL	Progesterone	Placebo or not treatment	Risk for PTL Neonatal or Perinatal death Pyrexia in pregnant woman Risk of assisted ventilation Respiratory distress Assisted ventilation

			Necrotizing enterocolitis Neonatal sepsis Intraventricular hemorrhage
Pregnant women at risk for PTL	Cerclage	Placebo or not treatment	Risk for PTL Neonatal or Perinatal death Pyrexia in pregnant woman Respiratory distress Intraventricular hemorrhage Necrotizing enterocolitis Retinopathy Premature rupture of membranes Maternal adverse events (vaginal discharge, bleeding, and fever that does not require antibiotics).

DIAGNOSIS

Question 2. In pregnant women suspected of preterm premature rupture of membranes, what test should be used to make the diagnosis?

POPULATION	INTERVENTION	COMPARATOR	OUTCOME(S)
Pregnant women at risk for PTL	PAMG-1 IGFBP-1 AFP	PAMG-1 IGFBP-1 AFP	Sensibility for premature rupture of membranes. Specificity for premature rupture of membranes.

TREATMENT

Question 3. In pregnant women in preterm labor, should prophylactic antibiotics be administered before the labor?

POPULATION	INTERVENTION	COMPARATOR	OUTCOME(S)
Pregnant women in preterm labor with intact membranes	Administer antibiotics	Not administer antibiotics	Neonatal death Perinatal death Stillbirth Child mortality Maternal infection Prolongation of pregnancy Maternal adverse effects Average birth weight

			<p>Risk of weight less than 2500 gr</p> <p>Admission to a neonatal special or intensive care unit</p> <p>Child functional disability</p>
Pregnant women in preterm labor with PRM	Administer antibiotics	Not administer antibiotics	<p>Maternal death</p> <p>Perinatal death</p> <p>Maternal infection</p> <p>Pneumonia in the Newborn</p> <p>Positive blood culture</p> <p>Major brain abnormalities</p> <p>Respiratory distress syndrome</p> <p>Necrotizing enterocolitis</p> <p>Need for mechanical ventilation</p> <p>Admission to ICU in NB and the child</p> <p>Prolongation of pregnancy</p> <p>Adverse effects</p>
Pregnant women at risk for PTL	Penicillins Beta lactams Macrolides	Penicillins Beta lactams Macrolides	<p>Perinatal death</p> <p>Pyrexia in pregnant woman</p> <p>Respiratory distress</p> <p>Intraventricular hemorrhage</p> <p>Necrotizing enterocolitis</p> <p>Retinopathy</p> <p>Premature rupture of membranes</p> <p>Maternal adverse events (vaginal discharge, bleeding, and fever that does not require antibiotics).</p>

DIAGNOSIS			
Question 4. In pregnant women with intact membranes and preterm labor symptoms, what is the diagnostic accuracy of the test to diagnose preterm labor?			
POPULATION	INTERVENTION	COMPARATOR	OUTCOME(S)
Pregnant women with intact membranes and preterm labor symptoms	Cervical length	Fibronectin	Sensitivity to predict preterm labor

			Specificity to predict preterm labor
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TREATMENT			
Question 5. What is the clinical effectiveness of the use of corticosteroids for fetal lung maturation to improve maternal and neonatal outcomes?			
POPULATION	INTERVENTION	COMPARATOR	OUTCOME(S)
Pregnant women suspected of PTL	Corticosteroids	Placebo or not treatment	Perinatal death Neonatal death Fetal death Respiratory distress Intraventricular hemorrhage Necrotizing enterocolitis Maternal death Chorioamnionitis Endometritis Impaired glucose tolerance
Pregnant women suspected of PTL and Chorioamnionitis	Corticosteroids	Placebo or not treatment	Neonatal death
Pregnant women suspected of PTL who will undergo cesarean section	Corticosteroids	Placebo or not treatment	Admission to an intensive care unit Respiratory distress syndrome
Pregnant women suspected of PTL	Betamethasone Administration routes: oral	Dexamethasone Administration routes: IM	Neonatal death Prolongation of pregnancy Neonatal Sepsis
Pregnant women suspected of PTL	Repeated courses of corticosteroids	Single course of corticosteroids	Perinatal death Fetal death Prolongation of pregnancy Maternal infection Maternal adverse events
Question 6. What is the clinical effectiveness of magnesium sulphate in women at risk for PTL to prevent cerebral palsy and other neurological disorders in preterm-born children?			
POPULATION	INTERVENTION	COMPARATOR	OUTCOME(S)
Pregnant women at risk for PTL	Intravenous magnesium sulfate	Placebo or not treatment	Cerebral palsy Stillbirth Intracranial hemorrhage

			Periventricular leukomalacia Long-term severe motor dysfunction Developmental delay or difficulty in vision or hearing Adverse effects
Question 7. What is the clinical effectiveness of tocolytics in woman with suspected or confirmed PT labor to improve maternal and neonatal outcomes?			
POPULATION	INTERVENTION	COMPARATOR	OUTCOME(S)
Woman with suspected or confirmed PT labor	Betamimetics Prostaglandin inhibitors Calcium channel blockers Magnesium sulphate Oxytocin receptor antagonists	Placebo or not treatment	Delay labor for 48 hours Respiratory distress syndrome Neonatal mortality Severe adverse events
Question 8. In women with suspected or diagnosed PT labor (without indication of caesarean section), should caesarean section or vaginal delivery be indicated?			
POPULATION	INTERVENTION	COMPARATOR	OUTCOME(S)
Woman with suspected or diagnosed PT labor	Caesarean section	Vaginal delivery	Delay labor for 48 hours Respiratory distress syndrome Neonatal mortality Severe adverse events
Question 9. In preterm newborns, should delayed umbilical cord clamping be performed?			
POPULATION	INTERVENTION	COMPARATOR	OUTCOME(S)
Preterm newborn	Delayed umbilical cord clamping	No delayed umbilical cord clamping	Child mortality Intraventricular hemorrhage Requirement for blood transfusion Hematocrit Respiratory distress requiring mechanical ventilation Hyperbilirubinemia Severe Intraventricular hemorrhage Apgar score

Question 10. In preterm newborns with respiratory distress syndrome, should continuous positive airway pressure therapy be used?

POPULATION	INTERVENTION	COMPARATOR	OUTCOME(S)
Preterm newborns with respiratory distress syndrome	Continuous positive airway pressure therapy	Oxygen therapy alone	Neonatal death Respiratory failure requiring assisted ventilation Air leaks Need for surfactant therapy Risk for bronchopulmonary dysplasia (BPD)

Question 11. In preterm newborns who born before 32 weeks, what is the optimal oxygen therapy?

POPULATION	INTERVENTION	COMPARATOR	OUTCOME(S)
Preterm newborns who born before 32 weeks	Low-flow oxygen therapy	High-flow oxygen therapy	Neonatal death Risk for BPD Retinopathy Prematurity Necrotizing enterocolitis Severe Intraventricular hemorrhage Achievement of saturation target 10 minutes after birth Duration of mechanical ventilation or need for endotracheal intubation during resuscitation