AETNA BETTER HEALTH® OF MISSOURI
Preterm Labor practice guidelines

The Guideline was adapted from the American College of Obstetricians and Gynecologists (ACOG) to provide treatment guidance to primary care providers and is not intended to replace or preclude clinical judgment. The recommendations in this guideline do not indicate an exclusive course of treatment or serve as a standard of care. Variations, taking into account individual circumstances, may be appropriate. Based on the Clinical Practice Guideline developed by (ACOG), Aetna Better Health recommends following:

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| General  | • Preterm Labor generally can be defined as regular contractions that occur before 37 weeks of gestation and are associated with changes in the cervix.  
• Preterm birth affects 12% of all births in the US.  
• Preterm labor is the most common cause of antenatal hospitalization. |
| Diagnosis of preterm Labor | • In 80% of women with presumptive preterm labor, preterm delivery will not occur.  
• Historically, the clinical criteria for the diagnosis of preterm labor included (1) regular uterine activity that does not diminish with bed rest or hydration, (2) cervical change during an observation period, or (3) a cervix that is dilated on presentation.  
• Many tests to identify women at risk of preterm birth have been proposed and evaluated; however, only ultrasonography and fetal fibronectin testing have been shown to have benefit. Ultrasonography to determine cervical length, fetal fibronectin testing, or a combination of both may be useful in determining which women are high risk for preterm delivery. However, their clinical usefulness may rest primarily with their ability to identify women who are at least likely to deliver (i.e., their negative predictive value) given the lack of proven treatment options to prevent preterm birth. |
| Tocolytic drugs for treatment of preterm labor | • Tocolytic drugs inhibit myometrial contractions. Many agents have been used, including ethanol, magnesium sulfate, calcium channel blockers, oxytocin antagonists, nonsteroidal anti-inflammatory drugs (NSAIDs), and beta-mimetic agonists.  
• Comparison studies of the effectiveness of different tocolytic drugs show conflicting results between beta-mimetics, magnesium sulfate, calcium channel blockers, and NSAIDs. All have demonstrated only limited benefit. Hence, there is no clear first line tocolytic drug. Clinical circumstances and physician preferences should dictate treatment. Tocolytics can be administered either parenterally or orally.  
• Contraindications for tocolysis may include severe preeclampsia, placental abruption, intrauterine infection, lethal congenital or chromosomal abnormalities, advanced cervical dilatation, and evidence of fetal compromise or placental insufficiency. The upper limit of gestational age for the use of tocolytic drugs often relates to the neonatal treatment capabilities in the hospital where a clinician practices.  
• Tocolytic drugs may prolong gestation for 2-7 days, which can provide time for administration of steroids and maternal transport to a facility with a neonatal intensive care unit.  
• Prophylactic therapy, including tocolytic drugs, bed rest, hydration, and sedation, in asymptomatic women at increased risk for preterm delivery has not been demonstrated to be effective.  
• Neither maintenance treatment with tocolytic drugs nor repeated acute tocolysis improve
perinatal outcome; neither should be undertaken as a general practice.

- Serious adverse events are rare but potentially life threatening. Beta-mimetics, magnesium sulfate, and calcium channel blockers are all associated with an increased risk of pulmonary edema. Beta-mimetics are potent cardiovascular stimulants and can cause serious complications, such as maternal myocardial ischemia, metabolic derangements (e.g., hyperglycemia and hypokalemia), and fetal cardiac effects.
- Magnesium sulfate may cause maternal lethargy, drowsiness, double vision, nausea and vomiting. The NSAIDs appear to have the fewest maternal risks, but fetal effects include oligohydramnios and premature closure of the ductus arteriosus. Calcium channel blockers used as a single agent appear to have a good maternal and fetal safety profile. However, concomitant use of calcium channel blockers and magnesium sulfate is potentially harmful and has resulted in cardiovascular collapse. Combining tocolytic drugs potentially increases maternal morbidity and should be used with caution.

**Antibiotics for treatment of Preterm Labor**

- Women who present with symptoms of preterm labor may have infections of the upper genital tract. It has been theorized that infections or inflammation are associated with contractions and this theory provided the rationale for studies using antibiotics to decrease the risk of spontaneous birth.
- Most current evidence has failed to show a benefit from treatment with antibiotics to prolong pregnancy and reduce neonatal morbidities in women with preterm labor and intact membranes.
- Therefore, treating women in preterm labor and intact membranes with antibiotics for the sole purpose of preventing preterm delivery is not recommended. At present, it seems prudent to follow protocols for antibiotic prophylaxis against early-onset group B streptococcal sepsis, but there is little evidence that this approach also will prolong gestation.

**Antenatal Corticosteroid use**

- The most beneficial intervention for patients in true preterm labor is the administration of corticosteroids.
- A single course of corticosteroids is recommended for all pregnant women between 24 and 34 weeks of gestation who are at risk of preterm delivery within 7 days.
- Antenatal corticosteroids significantly reduce the incidence and severity of neonatal respiratory distress syndrome.
- The incidence of intraventricular hemorrhage and necrotizing enterocolitis also are reduced by the use of antenatal corticosteroids.
- The administration of betamethasone has also been shown to decrease neonatal mortality.
- Treatment should consist of either two doses of betamethasone or four doses of dexamethasone, both administered intramuscularly.

**Special clinical situations**

**Preterm contractions without cervical change**

No evidence exists to support the use of the following to prevent preterm delivery in women with contractions but no cervical change:
- Tocolytic therapy
- Home uterine activity monitoring
- Elective cerclage
- Narcotics

**Multiple gestations**

- Women with multiple gestations who have preterm contractions but no cervical change do not require tocolytic therapy.
- Although women with multiple gestations who are experiencing preterm labor may benefit from short-term tocolysis to allow for steroid administration, they have a greater risk of pulmonary edema when exposed to beta-mimetics or magnesium sulfate.

**Maintenance treatment after completed Acute treatment**

- Studies of maintenance tocolytic therapy in women who present with symptoms of preterm labor and receive tocolysis acutely show no difference in effectiveness between treatment and control groups.
- Prolonged oral, subcutaneous, or intravenous tocolytic treatment is not effective.
- The terbutaline pump has been demonstrated to be no more effective than saline.

**Recurrent Preterm Labor**
- The role of repeated acute tocolytic therapy in women with recurring symptoms of preterm labor is unknown.
- Maternal transport is a potential rationale for a subsequent treatment course.

**Amniocentesis**
- Amniocentesis to determine fetal lung maturity may have some benefits in guiding clinical decision making in women with symptoms of preterm labor.
- There is no evidence to suggest that routine amniocentesis to check for infection in these women can provide information that could be used to improve perinatal outcomes.

**Progesterone**
- Progesterone supplementation for the prevention of recurrent preterm birth should be offered with a singleton pregnancy and a prior spontaneous preterm birth due to spontaneous labor or premature rupture of membranes.
- Progesterone supplementation for asymptomatic women with an incidentally identified very short cervical length (< 15mm) is recommended however; routine cervical length screening is not mandated.

**Magnesium sulfate**
Available evidence suggests that magnesium sulfate given before anticipated preterm birth reduces the risk of cerebral palsy in surviving infants.

| Timeliness of Prenatal and Postpartum care | Once Aetna Better Health is notified that a member is pregnant, the Case Manager will work with the member to assure they receive timely prenatal and postpartum care. This will be measured using the HEDIS measures for Timeliness of Prenatal Care and Postpartum Care. |

**References**

2. ACOG Committee opinion, Number 445, November 2009, Antibiotics for Preterm Labor.
3. ACOG Committee opinion Number 419, October 2008, Use of Progesterone to Reduce Preterm Birth.
4. ACOG Committee opinion Number 402, March 2008, Antenatal Corticosteroid Therapy for Fetal Maturation.
5. ACOG Committee opinion Number 455, March 2010, Magnesium Sulfate Before Anticipated Preterm Birth for Neuroprotection.