



Effective Health Care

Comparative Effectiveness of Interventions to Manage Labor Nomination Summary Document

Results of Topic Selection Process & Next Steps

- The topic, *Comparative Effectiveness of Interventions to Manage Labor*, will go forward for refinement as a systematic review. The scope of this topic, including key questions, populations, interventions, comparators, and outcomes, will be further developed in the refinement phase.
- When key questions have been drafted, they will be posted on the AHRQ Web site and open for public comment. To sign up for notification when this and other Effective Health Care (EHC) Program topics are posted for public comment, please go to <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list/>.

Topic Description

Nominator(s): Health care professional association

Nomination Summary: The nominator notes that there is a lack of consensus regarding appropriate management of labor, particularly cases of prolonged labor. The nominator is concerned that the lack of consensus and guidance regarding appropriate management may lead to poor outcomes, including intrauterine infections, trauma to the vaginal wall, bladder, or rectum in the mother, and neonatal asphyxiation or brain damage causing neonatal morbidity and mortality.

Staff-Generated PICOs

Population: Women with usual labor or expected usual labor

- **Intervention:** Amniotomy
- **Comparator(s):** No amniotomy
- **Outcome(s):** Duration of labor, obstetrical outcomes (e.g., cord prolapse) and neonatal outcomes (e.g., neonatal infection)

- **Intervention:** Adjunctive interventions, such ambulation, nutrition, hydration, or coaching
- **Comparator(s):** Those listed above (i.e., compared to each other), usual care
- **Outcome(s):** Duration of labor, obstetrical outcomes (e.g. patient comfort), and neonatal outcomes (e.g., APGAR score)

- **Intervention:** Epidural analgesia
- **Comparator(s):** No epidural analgesia, or other analgesia
- **Outcome(s):** Duration of labor, obstetrical outcomes (e.g., pain), and neonatal

outcomes (e.g., perinatal infection)

- **Intervention:** Frequent cervical examinations
- **Comparator(s):** Usual care
- **Outcome(s):** Intrauterine infection, obstetrical outcomes (e.g., emergency cesarean section), and neonatal outcomes (e.g., perinatal infection)

- **Intervention:** Delayed pushing, Valsalva pushing
- **Comparator(s):** Those listed above (i.e., compared to each other), usual care
- **Outcome(s):** Duration of labor, obstetrical outcomes (e.g., pain, patient comfort), and neonatal complications (e.g., perinatal hypoxia)

Population: Women with labor dystocia

- **Intervention:** Use of pelvimetry results
- **Comparator(s):** No use of pelvimetry results
- **Outcome(s):** Obstetrical outcomes (e.g., emergency cesarean section, instrumental delivery) and neonatal outcomes (e.g., obstetric brachial plexus injuries)

- **Intervention:** Intrauterine pressure catheters
- **Comparator(s):** Clinical assessment, external fetal monitoring
- **Outcome(s):** Obstetrical outcomes (e.g., emergency cesarean section) and neonatal outcomes (e.g., perinatal hypoxia)

Population: Women in labor receiving oxytocin for labor dystocia

- **Intervention:** High dose oxytocin, Low dose oxytocin
- **Comparator(s):** Those listed above (i.e., compared to each other), no oxytocin
- **Outcome(s):** Duration of labor, obstetrical outcomes (e.g., uterine rupture), and neonatal outcomes (neonatal distress)

- **Intervention:** Electronic fetal monitoring
- **Comparator(s):** Other methods of monitoring fetal status
- **Outcome(s):** Obstetrical outcomes (e.g., fetal distress) and neonatal outcomes (e.g., perinatal hypoxia)

**Key Questions
from Nominator:**

1. What is the appropriate definition and arrest of the following:
 - Latent labor
 - Active labor
 - Second stage
 - After induction
2. In pregnant women near term, how does amniotomy versus no amniotomy affect labor?
3. For women in labor what are the benefits and harms of adjunctive interventions, including ambulation, nutrition, hydration, and coaching, during labor?

4. For women in labor, does use of epidural analgesia affect the progress of labor?
5. For women in labor, what are the benefits and harms of more frequent cervical examinations?
6. For women in the second stage of labor, is there a benefit from delayed or Valsalva pushing for time to delivery or mode of delivery?
7. For women in labor experiencing labor dystocia, are pelvimetry results beneficial in informing management decisions?
8. For women experiencing labor dystocia, is there a role for intrauterine pressure catheters in managing dystocia?
9. For women in labor, is high dose or low dose oxytocin more likely to affect dystocia and subsequent vaginal delivery?
10. For women in labor undergoing augmentation with oxytocin, does use of electronic fetal monitoring improve neonatal outcomes?

Considerations

- Normal labor is defined as uterine contractions that result in progressive dilation and effacement of the cervix. Dystocia of labor is defined as abnormally slow or arrested progress of labor.
- Labor dystocia may result in complications for both the mother and neonate, such as intrauterine infection and fetal distress. There are many interventions and management approaches for patients in normal labor and with labor dystocia. This topic nomination considers a wide range of interventions, including amniotomy, pelvimetry, intrauterine pressure catheters, electronic fetal monitoring, oxytocin administration, cervical examinations, epidural analgesia, delayed pushing, and adjunctive interventions. The interventions may be used alone or in combination with over interventions.
- While a scan of the literature identified evidence addressing some of the key questions, there was limited and/or conflicting evidence for other key questions. Additionally, the search did not identify a systematic review or evidence-based clinical guideline, which addressed all of the key questions.
- An AHRQ product has the potential for impact because of high interest from potential stakeholder groups in this topic. An AHRQ product that presents a comprehensive review and assessment of the available evidence may help to inform clinical guideline development by these groups.