



## Effective Health Care

### Strategies to Prevent Obstetric Brachial Plexus Injuries Nomination Summary Document

#### Results of Topic Selection Process & Next Steps

- The topic, *Strategies to Prevent Obstetric Brachial Plexus, Injuries* is not feasible for a full systematic review due to the limited data available for a review at this time.
- The topic could potentially be considered for new research in comparative effectiveness.

#### Topic Description

**Nominator(s):** Individual

**Nomination Summary:** The nominator is a caregiver for a child with obstetric brachial plexus injuries. The nominator believes that an improved understanding of strategies to prevent obstetric brachial plexus injuries may reduce the number of children affected by the condition. The nominator also notes that a reduction in the number of children with obstetric brachial plexus injuries would not only improve quality of life but also reduce the need for surgical and physical therapy interventions following the injury.

**Population(s):** Expectant mothers with the following risk factors:

- Maternal diabetes
- Breech presentation
- Long 2<sup>nd</sup> stage of labor
- Macrosomia
- Difficult delivery needing external assistance
- Shoulder dystocia
- Multiparity

**Intervention(s):** Delivery approaches, management strategies, clinician training

**Comparator(s):** Those listed above (i.e. compared to each other)

**Outcome(s):** Morbidity, prolonged hospitalizations, occurrence of adverse events, disability, and quality of life

**Key Questions from Nominator:** What is the comparative effectiveness of strategies to prevent obstetric brachial plexus injuries?

#### Considerations

- The topic meets Effective Health Care (EHC) Program appropriateness and importance criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)

- Obstetric brachial plexus injuries, often caused by force or torsion during the birth process, cause nerve damage in the upper extremities and can lead to short or long term disability, associated with a need for physical therapy and/or surgical intervention.
- Shoulder dystocia is estimated to cause obstetric brachial plexus injuries in 4-40% of shoulder dystocia cases. Interventions to address shoulder dystocia and prevent obstetric brachial plexus injuries include positioning maneuvers as well as more invasive interventions such as clavicle fracture or cesarean section.
- Based on a literature scan for published trials related to the prevention of obstetric brachial plexus injuries, there is not sufficient evidence comparing the effectiveness of different strategies and interventions to prevent obstetric brachial plexus injuries to include in a systematic review. Instead, available literature focuses on the prevention of conditions that may lead to obstetric brachial plexus injuries, such as gestational diabetes.
- Additional research focused on the shoulder dystocia, the primary causal factor of obstetric brachial plexus injuries, including risk factors for shoulder dystocia and interventions to address shoulder dystocia (e.g., positioning maneuvers) may also provide valuable insight into the prevention of obstetric brachial plexus injuries.