

# Maternal and neonatal outcomes associated with breech presentation in planned community births: a prospective observational cohort study

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## Abstract

**Objective** Investigate maternal and neonatal outcomes associated with breech presentation in planned community births in the United States **Design** Cohort analysis of a national perinatal data registry **Setting** Homes and birth centres, United States **Sample** Medical records of individuals with a term, singleton gestation (N=71,943) planning community birth at labour onset **Methods** Descriptive statistics to calculate associations between types of breech presentation and perinatal outcomes **Main Outcome Measures** *Maternal*: intrapartum/postpartum transfer, hospitalization, caesarean, haemorrhage, severe perineal laceration, duration of labour stages and membrane rupture *Neonatal*: transfer, hospitalization, NICU admission, congenital anomalies, umbilical cord prolapse, birth injury, intrapartum/neonatal death **Results** One percent (n=695) of individuals experienced breech birth, with most (57%) presenting frank breech (19% complete, 18% incomplete, 5% unknown breech type). Among all breech labours, there were high rates of intrapartum transfer and caesarean (OR 9.0, 95% CI 7.7-10.4 and OR 18.6, 95% CI 15.9-21.7, respectively), with no substantive difference based on parity, planned site of birth, or level of health system integration. Risk of nearly all assessed neonatal outcomes was higher for all breech presentation types, including hospital transfer, NICU admission, birth injury, and umbilical cord prolapse. Breech presentation was also associated with increased risk of intrapartum/neonatal death (OR 8.5, 95% CI 4.4-16.3), even after excluding congenital anomalies. **Conclusions** All types of breech presentation in community birth settings are associated with increased risk of adverse neonatal outcomes. Findings contribute to informed decision-making and reinforce the need for accessible, high-quality care for planned vaginal breech birth in hospitals.

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