

# Outcomes of Planned Home Birth With Registered Midwife Versus Planned Hospital Birth With Midwife or Physician

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**Background:** Studies of planned home births attended by registered midwives have been limited by incomplete data, nonrepresentative sampling, inadequate statistical power and the inability to exclude unplanned home births. We compared the outcomes of planned home births attended by midwives with those of planned hospital births attended by midwives or physicians.

**Methods:** We included all planned home births attended by registered midwives from Jan. 1, 2000, to Dec. 31, 2004, in British Columbia, Canada (n = 2889), and all planned hospital births meeting the eligibility requirements for home birth that were attended by the same cohort of midwives (n = 4752). We also included a matched sample of physician-attended planned hospital births (n = 5331). The primary outcome measure was perinatal mortality; secondary outcomes were obstetric interventions and adverse maternal and neonatal outcomes.

**Results:** The rate of perinatal death per 1000 births was 0.35 (95% confidence interval [CI] 0.00-1.03) in the group of planned home births; the rate in the group of planned hospital births was 0.57 (95% CI 0.00-1.43) among women attended by a midwife and 0.64 (95% CI 0.00-1.56) among those attended by a physician. Women in the planned home-birth group were significantly less likely than those who planned a midwife-attended hospital birth to have obstetric interventions (e.g., electronic fetal monitoring, relative risk [RR] 0.32, 95% CI 0.29-0.36; assisted vaginal delivery, RR 0.41, 95% 0.33-0.52) or adverse maternal outcomes (e.g., third- or fourth-degree perineal tear, RR 0.41, 95% CI 0.28-0.59; postpartum hemorrhage, RR 0.62, 95% CI 0.49-0.77). The findings were similar in the comparison with physician-assisted hospital births. Newborns in the home-birth group were less likely than those in the midwife-attended hospital-birth group to require resuscitation at birth (RR 0.23, 95% CI 0.14-0.37) or oxygen therapy beyond 24 hours (RR 0.37, 95% CI 0.24-0.59). The findings were similar in the comparison with newborns in the physician-assisted hospital births; in addition, newborns in the home-birth group were less likely to have meconium aspiration (RR 0.45, 95% CI 0.21-0.93) and more likely to be admitted to hospital or readmitted if born in hospital (RR 1.39, 95% CI 1.09-1.85).

**Interpretation:** Planned home birth attended by a registered midwife was associated with very low and comparable rates of perinatal death and reduced rates of obstetric interventions and other adverse perinatal outcomes compared with planned hospital birth attended by a midwife or physician.

