

# Unplanned births out-of-hospital increases risk of infant mortality

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New research reveals that unplanned births out-of-hospital in Norway are associated with higher infant mortality. The findings published in *Acta Obstetricia et Gynecologica Scandinavica*, a journal of the Nordic Federation of Societies of Obstetrics and Gynecology, indicate that young women who have given birth at least once before (multiparous) and those living in remote areas are more likely to have unplanned deliveries, which may increase the risk of death in newborns.

In 2013, close to 60,000 babies were born in Norway according to the Statistics Norway. The country now has 51 institutions with birthing centers—down from 158 units in 1972. With more specialized care the perinatal mortality rates decreased from 22 out of 1,000 births (1967-1971) to just 5 in 2010. However, medical evidence reports that with less birth centers the rates of unplanned births in Norway have increased from 4 per 1,000 births in 1979-83 to 7 in 1,000 births over the past few years.

"This trend to centralize obstetrics has improved perinatal mortality rates," explains lead author Dr. Björn Gunnarsson from the Norwegian Air Ambulance Foundation in Drøbak, Norway. "One downside to specialized care in central locations is an increase in unplanned births and its adverse outcomes, which is the focus of our study."

For this cross-sectional study, researchers used data from the Medical Birth Registry of Norway from 1999 to 2013. This registry includes data for deliveries outside the hospital, which are required to be submitted by

the physician or midwife present during or after the birth. The team compared the 4,899 unplanned births with all other births (reference group) that occurred during the study period.

Findings indicate that 7 per 1,000 deliveries are unplanned births that take place out of hospitals in Norway since 1999. Young multiparous women living in [remote areas](#) are most likely to have unplanned deliveries. In fact, young multiparous women giving birth have a 20 times greater risk of unplanned birth compared to older women who have never given birth (nullipara).

Further analysis shows that during the study period, the unplanned birth group had higher perinatal mortality rate compared to the reference group at 11 versus 5 per 1,000 births, respectively. The annual infant mortality rate did not change significantly from year to year during the time period, but did decline an average of 3% each year for the reference group. Babies with extremely low birthweight (500-999 grams; 1-2 pounds) in the unplanned [birth](#) group had a three times higher mortality risk compared to babies in the same birthweight category in the reference group.

Dr. Gunnarsson concludes, "Our findings suggest that unplanned births are linked to greater risk of [perinatal mortality](#), which may be caused by limited access to proper medical care for vulnerable newborns. Further study of additional morbidities and potential interventions that reduce unplanned births is needed."

**More information:** "Characteristics and Outcome of Unplanned Births Out-Of-Institutions in Norway From 1999 To 2013: A Cross-Sectional Study." Björn Gunnarsson, Alexander K. Smáráson, Eirik Skogvoll and Sigurd Fasting. *Acta Obstetricia et Gynecologica Scandinavica*; Published online: September 3, 2014. [DOI: 10.1111/aogs.12450](#)

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