

**Abstract citation ID: ckad160.934****Risk of low birthweight and late antenatal care initiation in an ethnically diverse maternal cohort**

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**Background:**

Babies born with low birthweight (LBW, < 2500 g) are vulnerable to infant mortality, restricted growth, poorer development, and long-term health complications. Antenatal care (ANC) can improve maternal and infant outcomes; women are recommended to have first antenatal visit by 10 weeks' gestation. Ethnic minority women are significantly more likely to initiate ANC later than recommended gestational week compared to white women. This study examined associations between late ANC initiation (first appointment >10 weeks gestation) and LBW in an ethnically diverse maternal cohort in the UK.

**Methods:**

A retrospective cross sectional study using routinely collected anonymous data of singleton births during April 2015 - October 2022 from a large UK National Health Service maternity unit in an ethnically diverse area. Logistic regression models were used to examine associations between late ANC initiation and prevalence of low (<2500 g); very low (VLBW, <1500 g) and extremely low (ELBW, <1000g) birth weight.

**Results:**

Of 39,785 singleton births recorded, more than one third (34.6%) were to mothers from Black African, Black Caribbean, Indian, Pakistani, and Bangladeshi backgrounds. Birthweight was reported for 39,698 (99.78%) neonates; among them 8.9% had LBW, including 1.0% VLBW and 1.1% ELBW. More than one third (34.8%) of mothers had first appointment at > 10 weeks, including 26% during 11-19 weeks and 8.8% at > 20 weeks. Late ANC initiation was associated with increased risk of LBW for neonates: OR = 1.15 [95% CI: 1.07, 1.23] and 1.60 [1.44, 1.78] for ANC initiation at > 10 weeks and ≥ 20 weeks respectively (vs ≤ 10 weeks). Mothers who started care at ≥ 20 weeks were 5.37 times (95% CI: 4.31, 6.70) more likely to have a baby born with ELBW (vs ≤ 10 weeks).

**Conclusions:**

Neonates born to mothers who started antenatal care late in ethnically diverse neighborhoods are more likely to have low birthweight, highlighting the need for targeted primary and secondary interventions.

**Key messages:**

- Neonates born to mothers who started antenatal care late in ethnically diverse neighborhoods are more likely to have low birthweight.
- Targeted programmes and services are needed to support mothers in ethnically diverse neighborhoods to start antenatal care on time.