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## Preconception health among migrant women in England: a cross-sectional analysis of maternity services data 2018-2019

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**Background:** Perinatal outcomes are poor among migrant women in vulnerable situations, but little is known about their health preconception. We investigated preconception health inequalities between migrant women in vulnerable situations and non-migrant women.

**Methods:** This national cross-sectional study used data from the NHS Maternity Services Data Set (MSDS) version 1.5, incorporating NHS maternity services in England.

All 652,880 women with an antenatal booking appointment between 1/4/2018-31/3/2019 were included. Migration category data were available for 66.2% (n=432,022).

Odds ratios were calculated comparing preconception indicators among probable migrants in vulnerable situations (English not their first language with complex social factors (CSF)), probable migrants not in vulnerable situations (English not their first language without CSF), probable non-migrants in vulnerable situations (English their first language with CSF) and probable non-migrants not in vulnerable situations (English their first language without CSF). CSF include recent migrants, asylum seekers, refugees, difficulty reading/speaking English; alcohol and/or drugs misuse; aged under 20; and/or experiencing domestic abuse.

**Findings:** Probable migrants in vulnerable situations (n=25,070) had over twice the odds of not taking folic acid preconception compared to probable non-migrants not in vulnerable situations (odds ratio 2.15, 95% confidence interval 2.06-2.25), n=303,737). They had increased odds of previous obstetric complications and being underweight, but lower odds of physical and mental health conditions (apart from diabetes and hepatitis b), smoking and overweight or obesity.

**Interpretation:** Inequalities exist across many preconception indicators, highlighting opportunities to improve preconception health in this population to reduce health inequalities and improve perinatal and neonatal outcomes.

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