

Using the Northern Ireland Maternity System (NIMATS) to determine the relationship of Body Mass Index (BMI) in the pregnant population with other chronic conditions and with pregnancy and birth outcomes

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Background

Increasing numbers of women living with chronic conditions are becoming pregnant (JÄ, lving et al., 2016). The presence of chronic conditions can contribute to adverse outcomes in pregnancy and in later life for mother and infant (Gilmore et al., 2015; Schetter and Tanner, 2012). Over recent years, the role of increasing BMI in pregnancy has gained prominence, with risk factors for maternal obesity well documented in literature.

Aim

To determine the relationship between BMI and other chronic conditions (multimorbidity) and pregnancy and birth outcomes in Northern Ireland.

Method

A cross-sectional cohort study was undertaken using data from the NIMATS database (2014-2015), accessed via the Honest Broker Service, with approval by the Office for Research Ethics Committees Northern Ireland (ORECNI) and the Honest Broker Governance Board.

Results

Regression analyses demonstrated statistically significant relationships between increasing BMI and maternal conditions such as asthma, diabetes, epilepsy, hypertension, mental health and thyroid disease as well as a number of labour and birth outcomes. Mostly, these relationships were shown to increase with increasing BMI.

Discussion

The findings from this study have important implications for the provision of preconception care, maternity services (including health professional training), child health services and the public health agenda.

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