

R074: Improving Health in the Preconception Period: Using existing data to characterise health in the preconception period and during pregnancy in NI – QUB

Women's health before pregnancy can help provide the foundation for successful pregnancies, and health before and during pregnancy is very important for both mums and babies, in the short and long-term.

This project aims to investigate preconception and early pregnancy health in women in NI who have had an antenatal booking from January 2011 to December 2021.

The objective is to characterise the current state of preconception health of women in NI by examining preconception and early pregnancy social, behavioural and biomedical risk factors or exposures and wider determinants of health that may affect potential future pregnancies of adults of childbearing age (i.e., indicators).

The present research will seek to address the following research questions:

1. Which preconception and early pregnancy social, behavioural and biomedical risk factors or exposures and wider determinants of health that may affect potential future pregnancies of adults of childbearing age (i.e., indicators) are currently recorded in the Northern Ireland Maternity System (NIMATS), and how adequate is data quality (e.g., completeness of data)?
2. What is the current prevalence and distribution of preconception and early pregnancy health and social indicators among women in NI?
3. How does preconception and early pregnancy health vary between subgroups of the population (e.g., pregnancy intention, gravida, general health status and sociodemographic factors including age group, deprivation, ethnicity)?
4. How have preconception and early pregnancy health and social indicators changed across NI since the launch of each value from NIMATS/in the last 11 years?
5. How do preconception and early pregnancy health and sociodemographic factors vary for the same woman over subsequent pregnancies?
6. What is the association between preconception health and selected pregnancy and infant outcomes (e.g., breastfeeding, birth weight, birth status)?

There is a need to understand the prevalence of health behaviours and risk factors as measured by the preconception and early pregnancy indicators in NI that are currently captured by routine data, and gauge a systems-wide view of how the population is served.

This study may yield beneficial results for future generations, improving healthcare for women by informing routine preconception health monitoring in NI (e.g., suggesting the monitoring of additional factors or suggesting amendments to improve factors currently monitored) and service needs, identifying at risk groups or those with greatest need for preconception care and intervention, and informing future strategies, policy and interventions to improve preconception care. Understanding how to improve the data collection methods used in NIMATS would also improve the resources available for other researchers to use in future studies.

Finally, the present research is supported by the necessity to encourage accelerated action in this field and advance research on preconception health and care in NI so it can be

aligned with the rest of the UK. Since NI does not currently have a stand-alone policy aiming to improve preconception care, this is an opportune time to present preconception-focused health information to improve preconception health and care.