Natural experimental evaluation of a complex intervention to promote increased smoking cessation rates among pregnant women

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Background & aim: Smoking in pregnancy increases the risk of serious adverse outcomes including miscarriage, stillbirth and preterm delivery. Smoking rates among pregnant women in the North East are the highest in England, affecting around 1 in 5 pregnancies. In August 2012, Fresh (the North East tobacco control office) commissioned a comprehensive intervention (the ‘babyClear’ programme) delivered by the Tobacco Control Collaborating Centre. ‘babyClear’ aims to reconfigure services for pregnant smokers attending maternity services. It comprises a new referral pathway based on universal carbon monoxide monitoring by midwives at the booking appointment, with agreed referral thresholds and supported by training of all midwives and stop smoking advisors in how to give effective advice to support pregnant smokers to quit. The babyClear intervention was rolled out into routine service in the North East during 2013-14.

Our project aims to evaluate this intervention using both quantitative and qualitative approaches. The study runs from April 2013 until April 2015 and is funded by SPHR’s Public Health Practice Evaluation Scheme (PHPES).

Key research questions: Does a complex service reconfiguration intervention improve delivery of smoking cessation interventions to pregnant smokers? Can the reconfigured service can be implemented and sustained? Does the new service result in improved quit rates and pregnancy outcomes? What are the costs and consequences of the intervention?

Population: All pregnant women attending maternity services in the North East of England, and delivering their babies, between April 2012 and September 2014

Study design and methods: The quantitative evaluation uses routinely collected data from maternity services and stop smoking services to assess the impact of the phased rollout of ‘babyClear’ on referral rates, quit rates and pregnancy outcomes. Qualitative process evaluation will explore the perspectives of midwives, stop smoking services and pregnant smokers to assess whether the service is acceptable and feasible. A service user panel is providing user input to the process evaluation.

Where next? Interviews with women and health professionals will be completed in December 2014. Pilot data linkage was completed in August 2014, and the final quantitative database is currently being assembled. Results should be available mid-2015.

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