

## Estimating the costs to the NHS of smoking in pregnancy for pregnant women and infants

- Smoking in pregnancy imposes a considerable economic burden on society.
- The aim of this study was to estimate the additional costs to the NHS, during pregnancy and the year following birth, of a mother continuing to smoke during pregnancy.
- Costs to the NHS related to maternal increased risk of spontaneous abortion, ectopic pregnancy, placenta previa, abruptio placenta, preterm premature rupture of membranes and decreased risk of pre-eclampsia are estimated to be between £8-64 million per year based on different costing methodologies.
- Costs to the NHS related to infant (0-12 months) increased risk of preterm delivery, low birth weight, Sudden Infant Death Syndrome, perinatal mortality, asthma, otitis media, and upper and lower respiratory infections are estimated to be between £12-23.5 million per year.
- Positive economic cost savings could be generated with low-cost smoking cessation interventions. We estimate that spending between £13.60-£37.00 per pregnant smoker would yield positive cost savings for the NHS.
- Our cost estimates are conservative, being limited to NHS costs during pregnancy and the first year of life.
- Further research is needed to estimate the non-NHS and long-term costs of smoking in pregnancy, and the enhanced investment in smoking cessation interventions which would be cost effective within such an extended cost framework.

## Details of the research team

Christine Godfrey<sup>1</sup>, Kate Pickett<sup>1</sup>, Steve Parrott<sup>1</sup>, Noreen Mdege<sup>1</sup>, Deepa Eapen<sup>1</sup>.

<sup>1</sup>Department of Health Sciences, Seebohm Rowntree Building, University of York, Heslington, York, YO10 5DD

## **Address for Correspondence**

Professor Christine Godfrey, Department of Health Sciences, University of York, York YO10 5DD. Email address: cg2@york.ac.uk

**About PHRC**: The Public Health Research Consortium (PHRC) is funded by the Department of Health Policy Research Programme. The PHRC brings together researchers from 11 UK institutions and aims to strengthen the evidence base for public health, with a strong emphasis on tackling socioeconomic inequalities in health. For more information, visit: <a href="https://www.york.ac.uk/phrc/index.htm">www.york.ac.uk/phrc/index.htm</a>

**Disclaimer**: The views expressed in this publication are those of the authors and not necessarily those of the PHRC or the Department of Health Policy Research Programme.