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Preventing Return to Smoking Postpartum: PReS Study

– DEVELOPMENT OF AN EVIDENCE BASED COMPLEX INTERVENTION FOR MAINTAINING POSITIVE BEHAVIOUR CHANGE

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https://www.uea.ac.uk/medicine/research/addiction
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• University of East Anglia (MED): CI Dr Caitlin Notley; Lead Researcher Tracey Brown; Vivienne Maskrey (smoking relapse prevention)

• University of East Anglia (HSC): Dr Felix Naughton; Dr Wendy Hardeman (Behaviour change theory, intervention development)

• University of Stirling: Professor Linda Bauld (Cancer Research UK cancer prevention champion, Deputy Director of the UK Centre for Tobacco and Alcohol Studies and Co-Director of the Pregnancy Challenge group)

• University of Leicester: Professor Richard Holland (Public health)

• St George’s, University of London: Professor Michael Ussher (Smoking cessation in pregnancy)

• University of Nottingham: Dr Sophie Orton (Smoking cessation in pregnancy)

• NO CONFLICTS OF INTEREST TO DECLARE
Policy

ACHIEVING WORLD-CLASS CANCER OUTCOMES
A STRATEGY FOR ENGLAND
2015-2020

Review of the Challenge
2018

Towards a Smokefree Generation
A Tobacco Control Plan for England

Department of Health

University of East Anglia
Norwich Medical School

July 2017
A stall in progress?

Smoking prevalence in the UK 2018

Smoking status at time of delivery 2018

Figure 1: Progress needed to achieve 2022 ambition
PReS Study: Background

- 697,852 live births in England and Wales (ONS, 2015)

- Approximately 26% of UK women report smoking in the 12 months before pregnancy (Infant feeding survey, Health & Social Care Information Centre, 2012)

- More women quit during pregnancy than at any other time. 45% are able to “spontaneously quit” (Lumley, 2009)

- The majority of women who quit smoking in pregnancy return to smoking within six months of the birth of the baby
Motivation, intention to quit only for pregnancy

Negative social influences

Identify as a smoker and as a mother

Partner/household smoking

Low confidence to remain abstinent

Stress, depression or anxiety

Physiological changes

Low SES status

not breastfeeding

Mistaken beliefs

PReS Study: Background

• Cost of returning to smoking after pregnancy is estimated at £64 million (NICE, 2010)

• Most young women will be young enough to minimize long-term health damage (ASH, 2016)

• Babies have higher risks of cot death, breathing problems and ear infections

• Children of smoking mothers are twice as likely to become smokers themselves (Leonardi Bee, 2011)

• There are no effective interventions for preventing postpartum smoking relapse (Cochrane, 2015, Shaw et al 2016)

• There are no NICE guidelines

• There is no routine provision of support
PReS Study: Aims

- Map literature to identify determinants and specify promising behavioural change techniques
- Refine a prototype intervention through focus groups with women, partners and health professionals
- Model the prototype intervention with postpartum ex-smokers
- Explore initial acceptability, timing and delivery
- Define an intervention suitable for testing in a phase II randomised feasibility trial

Following MRC framework for the development of complex interventions
Methods

Phase 1 (6 months)
Systematic review of behaviour change techniques within existing interventions

Phase 2 (6 months)
Focus groups & qualitative interviews

Phase 3 (6 months)
Person-centred one-to-one modelling meetings with postpartum ex-smokers
BCT Review: Summary key findings

- 32 included studies
- 6 deemed to be long-term effective.
- These six studies used self-help, mainly in conjunction with counselling, and were largely delivered remotely.
- 6 ‘promising’ BCTs i.e. both frequently occurring and present in trials which demonstrated long-term effectiveness:
ISSUE & DETERMINANTS
Lapse/relapse to smoking postpartum

Capability barriers
- Knowledge and coping skills
- Low confidence in ability to remain abstinent
- Physiological changes increasing cravings postpartum
- Less stamina to engage with mental processes pre- and postpartum
- Mental health/limitations

Opportunity barriers
- Living with a smoking partner/household smoker
- Part of family/social group where majority are smokers
- Lower levels of partner/social support
- Criticised by society and no recognition of smoking abstinence
- Lack of time for self (particularly where more than one child)
- Lower access to relevant information/good quality care/CO testing/NRT/cigarette information

Motivation barriers
- Lower motivation to maintain the quit for self (only for pregnancy/breastfeeding)
- Reduced belief about dangers of smoking postpartum
- Poor adjustment to new identity as a mother and an ex-smoker
- Higher depression/anxiety/stress/boredom/guilt/feelings of failure
- Higher level of addiction and more likely to use in response to circumstances
- Mistaken beliefs about likelihood of relapse
- Concerns of weight gain

INTERVENTION COMPONENTS

Intervention functions
- Education
- Persuasion
- RESTRUCTURING
- Environmental restructuring
- Enablement
- Training

BCTs
- 1.1 Goal setting (behaviour)
- 1.2 Problem solving
- 1.4 Action planning
- 1.5 Review behaviour goal(s)
- 1.9 Commitment
- 2.2 Feedback on behaviour
- 2.3 Self-monitoring of behaviour
- 2.6 Biofeedback (CO monitoring)
- 3.1 Social support (unspecified)
- 4.1 Instruction on how to perform a behaviour
- 4.2 Information about consequences
- 5.1 Information about health consequences
- 5.3 Information about social/environmental consequences
- 7.1 Prompts/cues
- 8.2 Behaviour substitution
- 9.1 Credibility source
- 10.3 Non-specific reward
- 10.6 Non-specific incentive
- 11.1 Pharmacological support
- 11.2 Reduce negative emotions
- 12.1 Restructuring the physical environment
- 12.2 Restructuring the social environment
- 12.3 Avoidance/reducing exposure to cues for the behaviour
- 12.4 Distraction
- 13.1 Identity associated with changed behaviour
- 15.1 Verbal persuasion about capability
- 15.2 Mental rehearsal of successful performance
- 15.3 Focus on past success

INTERVENTION ACTIVITIES

Intervention strategies
- Tailored package
- Leaflet about benefits and strategies for preventing postpartum relapse for women
- Leaflet for partner/friend/family member aimed at support
- Website/app with further information and social support
- Tailored text support/app notifications
- “Healthy Parent Pack”

Process measures:
- Capability
- Enhanced understanding of risks of smoking and benefits of postpartum abstinence
- Enhanced capacity to resist urges to smoke
- Opportunity
- Improved social support
- Improved environment to aid obstetric abstinence
- Motivation
- Stronger beliefs about postpartum abstinence
- Stronger sense of identity as an ex-smoker
- Reduced negative emotions

OUTCOMES
Smoking abstinence postpartum

PREs
Preventing Relapse to Smoking Postpartum
**Phase 2 – Qualitative study**

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<td>Postpartum ex-smokers</td>
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PReS intervention – becoming more defined...

Intervention start - pregnancy

Postpartum follow up

Tailored options

Postpartum and the future

Intervention start - pregnancy

Postpartum follow up

Tailored options

Postpartum and the future

Tobacco cessation: relapse prevention

A few months ago, you started something that you are extremely proud of - you quit smoking. However, recently it seems that the temptation to smoke again has increased and you feel more at risk. How can you avoid a relapse?
PReS Study focus group initial feedback

Women like the idea of a face to face appointment at the end of pregnancy talking about relapse risk. With the midwife?

Booklet – variable reaction. Possibly an app or interactive resource instead - website (or choice?)

Postpartum birth visit should revisit booklet/resource

Strong support for text message support (tailored)

Mixed response to incentives

Information about e cigs critical, but not for everyone as an option

Support for cessation support for partners

Follow up relapse session important – probably as a virtual group
**PReS Study Intervention pathway**

1st midwife appointment
- Leaflet for pregnant quitter
- Leaflet for partner/friend/family member
- Or self-referral via posters at Children’s Centres and elsewhere

Website/App
- Including peer/social support platform
- + Text support/App notifications where requested
  - Tailored notifications to reduce over time and cease 1 year postpartum (or until participant requests a stop)

Subsequent midwife appointments
- Leaflet “revisited” (both woman and partner/friend/family member)

First health visitor appointment
- “4th Trimester Pack” including leaflets given by midwife

Subsequent health visitor appointments
- “4th Trimester Pack” “revisited” (both woman and partner/friend/family member)

Ongoing
- Web/app support + links to other organisations

**Key content**

- Positively framed whilst giving the facts (including statistics, images and peer content)
- Focus on the baby and second hand smoke
- Relapse strategies (action planning, problem solving and goal setting)
- Partner/social support tips
- Influences on breast and bottle feeding
- Advice on incentives and congratulations/encouraging messages
- Advice on other forms of support including NRT and e-cigarettes
- Contact details for further support
- Offer to CO test quitter and partner at appointments
PReS Intervention – introducing ‘BabyBreathe’

Our Top Tips for Staying Smoke Free

1. Think of the new you and your new baby. Remind yourself why you want to stay smoke free.
2. Have you or a family member tried to stop smoke for you or someone who is trying to stop smoking?
3. Have you or a family member tried to stop smoke for you or someone who is trying to stop smoking?
4. How often do you do a smoke free day? Have you or someone who is trying to stop smoking?
5. What do you or someone who is trying to stop smoking?
6. Apart from your baby's health, what was your reason to stop?

Here to support your journey as a smoke-free mum

Congratulations!

Stopping smoking was hard, but you did it! You’re already doing the very best you can for the health of your baby and yourself.

We’d like to help you continue on your journey.

BabyBreathe is a free package of support to help you stay smoke free. We can offer you:

- Regular contact with our friendly team
- Texts with instant messages
- Free gifts and support

You’ve achieved a lot - now it’s time to reward yourself and stay smoke free.

Join us in helping you stay smoke free!

- Get a free 4th trimester pack with gifts and further information
- Benefit from regular contact with our friendly team
- Receive support text messages
- Access to our free support website www.babybreathe.co.uk

Simply visit www.babybreathe.co.uk or call the support line.
Welcome to BabyBreathe!

Help to stay smoke free after your baby is born

Congratulations on quitting smoking for pregnancy! You’ve got this far, you know you can keep it up.

By staying smoke free after the birth of your baby you will help them have stronger lungs. You will help protect your baby from SIDS (sudden infant death syndrome), ear infections, breathing problems, asthma and chest infections.

*First time around I was so adamant I was never going to smoke again. I was so sure that I wouldn’t*

Things can be difficult after a baby and we understand it can be hard to stay quit. Many women return to smoking after birth of a baby but you don’t have to...

Use this site for help, support, and try our health and savings calculators to see how well you are doing!
Phase 3 emergent findings – Person centred feedback

Leaflet for women

‘BabyBreathe’ name was liked; positivity important; lack of information on staying smoke free currently. Keen to have this type of leaflet.

Leaflet for partners

Important to involve partners, who are often overlooked, however, engagement raised as a difficulty; potentially more hard-hitting leaflet for partners.

Text message support

Well received. Personalisation important. At the end of the programme, some women missed the texts and suggested an option to re-sign up

Website

Some would use as an app, some a website. Evidence based approach important, quotes liked. Favoured content: parents forum, ‘my page’, tips, facts and stats, cost calculator, health timeline, freebies and quizzes. Information on e-cigarettes useful. Further information e.g. about different strengths, breastfeeding implications, was wanted. Adding more information on weight, mood (postpartum depression) and the psychology of smoking were suggested.
Phase 3 emergent findings – Person centred feedback

Relapse prevention kit (‘4th trimester pack’)
Generally liked, although some concern about smoking reminders. Treats e.g. tea bags and bath salts well received. Idea of a ‘4th trimester’ was well understood

Intervention overall
Generally well liked by 9 out of 10 women. Intervention pathway thought to be appropriate and missing no major elements. Ability to tailor and personalise the intervention is crucial. Smoke free motivators included thinking of the baby, concerns of second and third hand smoke, information on statistics, praise and support. Partner support important: tailor more to a smokefree family/ home? Stress, guilt, judgement, isolation and identity were important factors. Entrenched confusion around the evidence on e cigarettes Recognition that returning to work and social situations were risky and more support may be needed for such periods.
Conclusions

Overall outcome is an intervention suitable for testing in a randomised controlled trial.
Thank you!