E-cigarettes use during pregnancy: what do we know?

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Disclosure

• I have received no industry funding (tobacco, pharmaceutical, e-cigarette, other) on any occasion

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Outline

• Context
• Nicotine use in pregnancy
• Smoking in Pregnancy Challenge Group
• Existing research on e-cigarettes in pregnancy
• Future research on e-cigarettes in pregnancy
• Challenge Group publications on e-cigarettes in pregnancy
Smoking in Pregnancy

Dose: response relationships

- Low birth weight
- Preterm birth
- Stillbirth & miscarriage
- Ectopic pregnancy
- Congenital anomalies
- SIDS
- Respiratory illness
- Obesity
- Type 2 Diabetes
Nicotine, cotinine & pregnancy

• Lipid soluble, easily crosses biological membranes

• Cotinine in fetal circulation @ 7 weeks

• maternal and fetal cotinine levels strongly correlated
SNAP Trial Findings, NRT Use in Pregnancy

<table>
<thead>
<tr>
<th>Multiple imputation ITT analysis [singleton live births n=1010]</th>
<th>Outcomes allocated from PQ2 or HPQ</th>
<th>OR (95% CI)</th>
</tr>
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<tbody>
<tr>
<td>Survival with no impairment (primary outcome)</td>
<td>NRT 323/445 (73%) vs Placebo 290/443 (65%)</td>
<td>1.40 (1.05-1.86) (p=0.023)</td>
</tr>
<tr>
<td>Respiratory problems</td>
<td>NRT 132/444 (30%) vs Placebo 111/444 (25%)</td>
<td>1.30 (0.96-1.77)</td>
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Single product NRT use not effective for smoking cessation BUT no adverse outcomes for infants followed up to 2 years. NRT widely prescribed for cessation during pregnancy in the UK including combination therapy.

September 2015: The UK public health community issues a joint statement making clear that all the evidence suggests that e-cigarettes are significantly less harmful than smoking and current smokers should not be discouraged from using them.

Our approach to e-cigarettes in pregnancy is build on this consensus, our approach to nicotine use in pregnancy, our investment in new research, and our development of practical guidance for women and health professionals based on what we know so far.
Advising on E-cigarette Use

NICE Recommendation 5: Advising on licensed nicotine containing products

PHE and Health Scotland agree that cessation services can offer behavioural support to those using e-cigs in a quit attempt.

NCSCT Recommendations:
• Be open to e-cig use
• Provide advice & support
• Be positive about e-cigs
• Many cessation services in Scotland now adopting this approach.
Challenge Group

Resources available from:
http://www.smokefreeaction.org.uk/SIP/index.html
Existing research in pregnancy

• To date we only have small surveys and qualitative studies* on vaping in pregnancy
• Pregnant women who smoke, or used to smoke, are using these devices. Up to one in four in some areas of the UK
• We’ve just completed a study led by Michael Ussher that explores women’s views

Attitudes to e-cigarettes in pregnancy

• **Aim:** to explore pregnant or recently pregnant women’s attitudes towards Ecs, experience of using them or not using them

• 30 qualitative interviews with 15 pregnant and 15 recently pregnant women who are smokers/recent ex-smokers

• Funded by CRUK

**Theme 1: Motivation to use ECs**

• Reasons: healthier alternative, to cut down or stop smoking in pregnancy, cheaper in longer term, behavioural aspects, family/friends using them “It’s healthier for you so what’s healthier for you has got to be healthier for the baby”

See Kate Bowker and colleagues poster here at SRNT
Attitudes to e-cigarettes in pregnancy

Theme 2: Consumer Aspects
• Design, preference for smaller, lighter products, something to hold in the hand, but concerns about no info in pack on use in pregnancy

Theme 3: Stigma
• Uncomfortable using them in public, socially unacceptable?

Theme 4: EC experience
• Used in similar situations to cigarettes, often away from children, but not as satisfying as cigs

Theme 5: Harm perceptions
• Unclear on nicotine consumed when using an EC, concerned about nicotine in pregnancy, many questions about lack of information and advice from profs on ECs in pregnancy

See Kate Bowker and colleagues poster here at SRNT
Future Research

• More evidence on use in pregnancy is needed particularly on effectiveness for smoking cessation amongst pregnant women and any impact on their children
• In the UK, two new studies are underway
• First, a national survey to obtain accurate estimates of prevalence
• Secondly, a large randomised controlled trial will start later this year funded by NIHR and led by Peter Hajek to assess this in England and Scotland
• In the meantime, we need to use what we know about e-cigarettes generally and the harms from smoking in pregnancy specifically in order to best support women.
PREP Trial

• Individually randomised controlled trial, recruitment at 12-24 weeks of pregnancy
• Control group (n=570) initial 2 week supply 15mg/16 hour NRT patches + weekly behavioural support via telephone
• Intervention group (n=570) EC starter kit with initial 2 week supply e-liquid + instructions + weekly telephone support
• Follow up end of pregnancy, 10 weeks pp and 3 months pp + birth and maternal outcomes
Guide for midwives on use of e-cigarettes in pregnancy

- Suggested responses to some frequently asked questions about their use during pregnancy.
- Background information for healthcare professionals on electronic cigarettes.

Available here [http://www.smokefreeaction.org.uk/SIP/files/eCigSIP.pdf](http://www.smokefreeaction.org.uk/SIP/files/eCigSIP.pdf)
Infographic for women on use of e-cigarettes in pregnancy

- Provides key information for pregnant women who are considering using electronic cigarettes to help them stop smoking
- Designed to be used in face-to-face consultations with women.
- Supports the detailed briefing.

Thank You

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