

# Priorities for Vaping Research: An Update



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**STIRLING**



**UKCTAS**

UK Centre for Tobacco & Alcohol Studies



CANCER  
RESEARCH  
UK

# Declaration of interest

- I have no links with any e-cigarette manufacturers
- I have received no funding from the tobacco or pharmaceutical industries
- My research is funded by Cancer Research UK, National Institute of Health Research, Roy Castle, Chief Scientist's Office, the EU and other government and charitable bodies.

# Outline

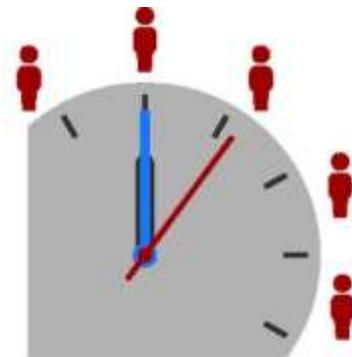
- Why tobacco harm reduction research is so important
- UKECRF
- Pregnancy
- Cancer Patients
- Mental Health
- Cardio-vascular disease
- Periodontal disease
- Next steps

# A global pandemic



The number of people killed globally by tobacco **EVERY YEAR**

600,000 of these are killed by second-hand smoke



One person dies from tobacco every **6 SECONDS**



**100 MILLION**

The number of deaths from tobacco in the 20th Century



**72 MILLION**

The number of deaths from war in the 20th Century (including WW1 and WW2)

Data sources: WHO; White M. Historical Atlas of the Twentieth Century, 2010.

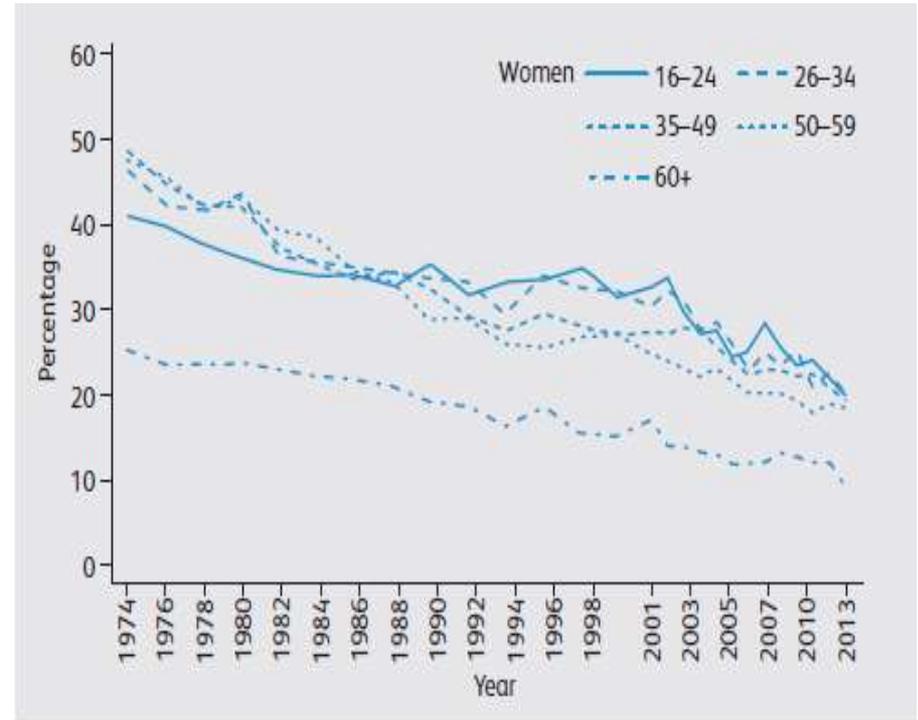
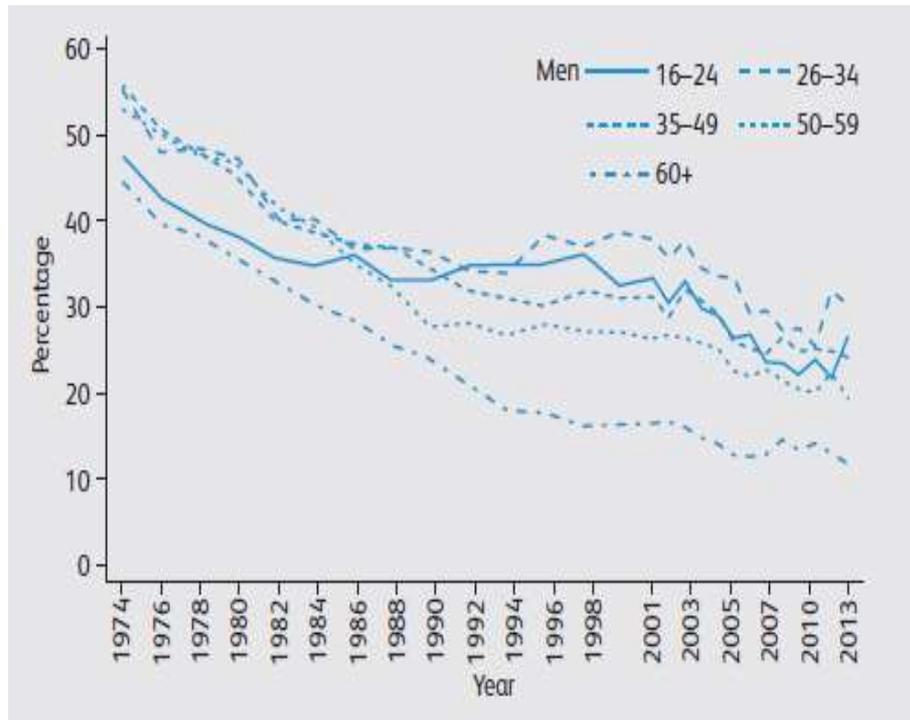
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# 'Nicotine without Smoke' key points from Chapter 2 (RCP, 2016)

- Smoking prevalence has been falling for decades in the UK in all age groups and in both men and women
- Since 2007, this decline has been particularly marked in children
- Uptake of smoking has in fact been falling progressively for decades
- **This contrasts with quit rates among adults who have become regular smokers, which have remained relatively constant over time**
- Smoking remains much more prevalent among the socio-economically disadvantaged and those with mental health problems
- **Therefore the approximately 8.7 million smokers in the UK today include a high proportion of the most disadvantaged individuals in society**
- Higher levels of addiction in these groups make quitting smoking particularly difficult
- **Helping established smokers to quit or else reduce the harm caused by smoking is therefore a key public health priority**

# Smoking prevalence by age and gender, Britain 1974-2013

RCP, 2016 (Fig 2.2 p13)



# Our work



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UK Centre for Tobacco & Alcohol Studies

**NICE** National Institute for Health and Care Excellence

## Tobacco: harm-reduction approaches to smoking

Issued: June 2013 last modified: July 2013

NICE public health guidance 45  
guidance.nice.org.uk/p45



## E-cigarette uptake and market

A report commissioned by Public Health England

Authors: Professor Lavinia Reid, Kathryn Angus and Dr Ben  
Institute for Social Marketing  
University of Stirling



Protecting and improving the nation's health

## E-cigarettes: an evidence update

A report commissioned by Public Health England

Authors:

McNeill A, Brose LS, Calder R, Hitchman SC  
Institute of Psychiatry, Psychology & Neuroscience, National Addictive  
Disorders Institute, London  
UK Centre for Tobacco & Alcohol Studies

Hajek P, McRobbie H (Chapters 9 and 10)  
Wolfson Institute of Preventive Medicine, Barts and The London  
Dentistry Queen Mary, University of London  
UK Centre for Tobacco & Alcohol Studies



## Nicotine without smoke

### Tobacco harm reduction

A report by the Tobacco Advisory Group  
of the Royal College of Physicians

April 2016



## Electronic cigarettes

A report commissioned by Public Health England

Authors: Professor John Britton and Dr Iain Reid  
UK Centre for Tobacco and Alcohol Studies  
Division of Epidemiology and Public Health, University of Nottingham



# THE UK ELECTRONIC CIGARETTE RESEARCH FORUM

cruk.org

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All-Party Parliamentary Group



- Identifying the problem is one thing, but doing something about it as a research community is something else
- Since the first E-cig Summit, we have made concerted efforts to grow the volume and quality of research on tobacco harm reduction, particularly e-cigarettes.
- We need to bring in new researchers to the field and support high quality studies that answer important research questions

# THE UK ELECTRONIC CIGARETTE RESEARCH FORUM

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- Along with PHE, our centre and Cancer Research UK established UKECRF just under 2 years ago
- Researchers and policy and practice colleagues from all parts of the UK meet 3x per year. Next meeting is **in Edinburgh**, Jan 19<sup>th</sup> 2017
- We also provide a monthly evidence briefing of the latest studies from a range of countries. Sent out by email from CRUK – contact [Alyssa.Best@cancer.org.uk](mailto:Alyssa.Best@cancer.org.uk) if you are interested in being added to the list.

# **New & ongoing research with priority groups**



# Pregnancy



- Qualitative study led by Prof Michael Ussher, interviews with 30 women including those using e-cigs during pregnancy (CRUK funded)
- National survey now underway to assess prevalence of use in pregnancy, led by Dr Sue Cooper (CRUK funded)
- Large RCT to start next year, led by Prof Peter Hajek (NIHR funded)

# Pregnancy

smoking in pregnancy  
challenge group

- Smoking in Pregnancy Challenge Group established in 2012, coordinated by ASH, chaired by Francine Bates (Lullaby Trust) and I
- Along with PHE, we've prepared practical materials on e-cigs in pregnancy which are proving hugely popular amongst midwives
- Information for women to be published this month



## Use of electronic cigarettes in pregnancy

A guide for midwives and  
other healthcare professionals



# E-cigarettes in pregnancy

## Are e-cigarettes safe to use?

- E-cigarettes aren't risk free, but they are much less harmful than smoking
- If using an e-cigarette helps you stay smokefree, it is much safer for you and your baby than smoking

## Can I still smoke a bit of tobacco?

- NO - Every cigarette harms you and your baby
- The only way to stop this is to stop smoking tobacco completely
- You can use your e-cigarette as often as you need to stay smokefree



## Can I use an e-cigarette to help me quit smoking?

- The safest products to use are nicotine replacements such as patches and gum
- If you find an e-cigarette helpful, it is far safer than continuing to smoke

## Is nicotine harmful for my baby?

- Nicotine alone is relatively harmless
- The main harm from smoking comes from the thousands of chemicals in tobacco smoke

## Is it OK for others to use e-cigarettes around me?

- It is far safer than allowing smoking
- Secondhand tobacco smoke is very harmful to you and your baby
- There is no evidence of harm to others from e-cigarette vapour

## Using an e-cigarette is far safer than smoking

- E-cigarettes allow you to inhale nicotine through a vapour rather than smoke
- E-cigarettes don't burn tobacco, and don't produce tar or carbon monoxide
- Vapour contains much lower levels of harmful chemicals than smoke



For more information on quitting smoking ask your midwife, GP or pharmacy team or search NHS Smokefree.



Always keep e-cigarettes and e-liquids out of the reach of children to avoid accidental poisoning. Always use the correct charger.



# Cancer Patients



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- Feasibility and single arm pilot study began earlier this year with lung cancer patients undergoing chemotherapy (RCLCF funded)
- Patients introduced in their own homes to a 2<sup>nd</sup> generation device and choice of flavours and nicotine content
- Home visits conducted by researchers and a network of experienced vapers recruited by NNA (Andy Morrison)

# Feasibility & acceptability of electronic cigarettes as an aid to smoking cessation for lung cancer patients

## Progress to date :

- 11 of 15 patients approached agreed to participate
- 9 patients enrolled & all started using e-cig
- Committing to switch date 'challenging' for this group
- All patients reported reduction in tobacco use in early weeks
- 4 pts reached final 16wk follow up
  - 2 CO validated quitters continuing to use e-cig
  - 1 continued smoker (no longer using e-cig)
  - 1 not obtained

6 qualitative interviews conducted-  
Motivation to use e-cig heavily  
influenced by day-to-day health





# Mental Health

- Ongoing programme of work at King's College London (Ann McNeill, Debbie Robson & colleagues)
- PhD research by Dr Pasquale Caponnetto in the USA & Italy – University of Catania
  - Qualitative interviews with patients with schizophrenia (n=15 motivated to quit, n=15 not motivated) about to start (ethical approval in place)
  - Pilot trial for smoking cessation in Sicily and New York, starting next year (40 smokers with schizophrenia not willing to quit) (recruitment Jan 2017)
  - Developing Protocol for multicenter (Sicily and New York) large (n=300) RCT, based on results emerging from qualitative and pilot studies (recruitment Jan 2018)

# CVD: The VAPOUR Pilot Study

The CardioVascular Impacts of Electronic Cigarettes in Comparison to the Use of Nicotine Replacement Patches

**Aims:** To investigate the short term cardiovascular and respiratory effects of electronic cigarettes in comparison to nicotine replacement patches in smokers undergoing smoking cessation

**Design:** Randomised control pilot study

**Status:** Recruiting

**Chief Investigator:** **Miss Daniele Kerr** (University of Glasgow)

**Principle Investigator:** Professor Christina Delles (University of Glasgow)

**Funder:** BHF Centre of Research Excellence Award

**NHS Sponsor:** NHS Greater Glasgow and Clyde



# Periodontal Disease

- Title: A mixed methods feasibility study of electronic cigarette use by patients with periodontitis.
- 80 participants- tobacco smokers + severe chronic periodontitis.
- Pilot RCT- ‘Usual Care’ (Brief Advice Intervention) V’s ‘Usual Care + e-cigarette Provision and Training’ + qualitative process evaluation.
- Recruitment: Sept 2016- Sept 2017
- Chief Investigator: Richard Holliday, Principal Investigator: Professor Philip Preshaw & Co-investigators: Professor Elaine McColl, Vicky Ryan, Professor Falko Sniehotta, Dr Nick Jakubovics, Professor Linda Bauld, Suzanne McDonald.



# Conclusions

- Research on tobacco harm reduction and e-cigarettes needs to focus not only on the general population but also priority groups where smoking rates are highest
- Since the first E-cigarette Summit, we have established a number of unique new studies in the UK
- While many research funders are now contributing, Cancer Research UK has provided leadership in this area, particularly through the establishment of UKECRF with PHE and UKCTAS
- Many studies are now actively involving vapers through the NNA – invaluable for recruitment but also how results will be used
- New researchers are now active in the field and a priority is to keep building this capacity
- Watch this space - soon these studies will yield results useful not only in the UK but internationally

# Acknowledgements:

Andy Morrison, Lesley Sinclair, Daniele Kerr, Richard Holliday, Pasquale Caponnetto, Debbie Robson, Francine Bates, Jenn Ware, Deborah Arnott, Alison Cox, Alyssa Best, Ann McNeill, John Britton, Jo Locker, Martin Dockrell, Sue Cooper, Michael Ussher, Lorien Jollye

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