

# Communication of research on e-cigarettes to smokers

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**UKCTAS**

UK Centre for Tobacco & Alcohol Studies

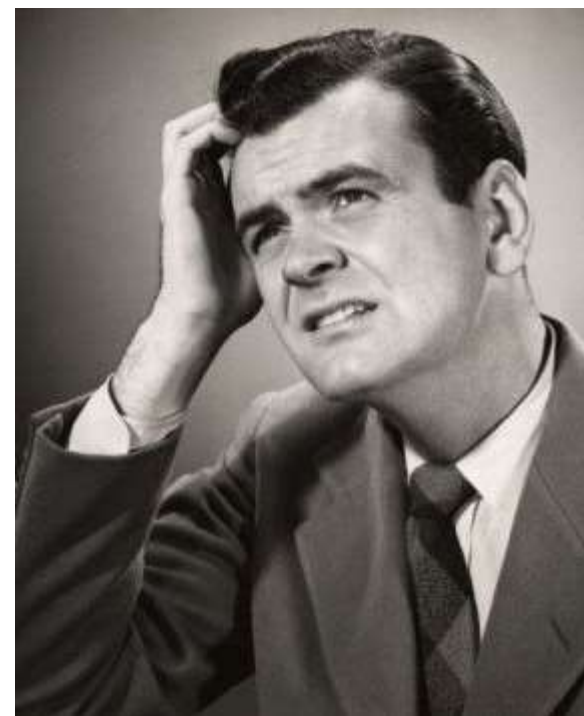
# Declaration of interest

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- I have no links with any e-cigarette (EC) manufacturers
- My research into safety and effects of EC is funded by National Institute of Health Research, UK Centre for Tobacco and Alcohol Studies and UK Medicines Regulatory Agency

# Smoker's perspective

- Quitting is hard. I tried an EC, it was not as good as cigs but I could probably live with it
- Is it worth the bother? Are they any better for me than cigarettes?



The key objective of relevant research is to help smokers make an informed decision

# Is vaping safer than smoking?

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## *Common sense, PHE and RCP verdicts*

- EC aerosol contains only a small fraction of chemicals that cause health damage from smoking, and even these are present at levels much lower than in tobacco smoke
- No serious risk from chemicals specific to EC identified so far. Unless new risks emerge:
- Vaping likely at least 95% less risky than smoking, but close monitoring is needed
- Smokers who cannot/do not want to quit should be encouraged to switch to vaping

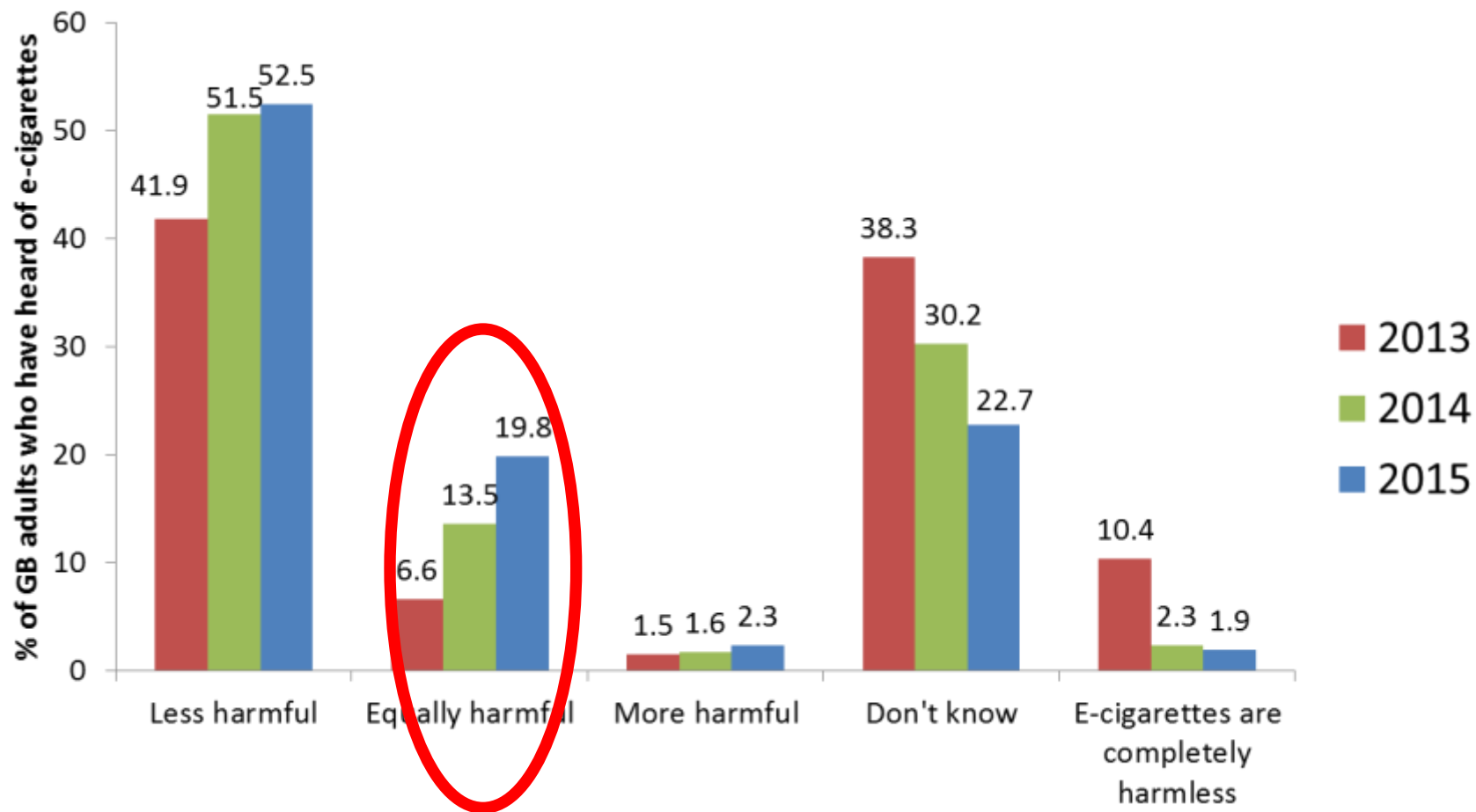
# And yet

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- EU 2012 – 2014 (Special Eurobarometer for Tobacco Survey)
- Perception that EC are harmful increased from **27% to 52%**
- US 2012 – 2015 (Tobacco Products and Risk Perceptions Surveys)
- EC are as harmful or more harmful than cigarettes: **From 13% to 40%**

# Vaping compared to smoking

(ASH YouGov adult surveys 2013-15)



# Background to The Problem

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- Rational opposition to vaping: EC threaten sales of stop smoking meds and cigarettes
- Irrational: EC seen as a threat to the goal of eradicating nicotine use and tobacco industry
- People behind WHO EC policies and authors of EU TPD share this stance
- Smokers' health less important than these moral goals (justified collateral damage)

# How researchers contribute

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- Research authors see anti-vaping stance as virtuous (as with anti-smoking) and may also expect (and get) better reception if their conclusions are anti-vaping
- Journals expect a wider publicity if they further magnify the anti-vaping message
- Media see anti-vaping stories as virtuous, or have other agendas
- Message to smokers: Switching to vaping is NOT worth the bother



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# SILLY LILY GETS CARRIED AWAY

WISLY EDWARDS COLLAPSES AT NOTTING HILL CARNIVAL: PAGES 4 & 5



**E-CIGS SERIOUSLY DAMAGE HEART**

# VAPING AS BAD AS FAGS

...the health risks of vaping are being compared to those of smoking. A study published in the journal *Heart* found that e-cigarettes can damage the heart and blood vessels, similar to the effects of tobacco. The researchers found that e-cigarettes cause inflammation and damage to the heart's arteries, which can lead to heart disease and stroke. The study also found that e-cigarettes can increase the risk of heart failure and other cardiovascular problems. The researchers concluded that e-cigarettes are not a safe alternative to smoking and that they should be avoided.



# Some rules of EC miscommunication

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1. Present any level of any chemical as danger; avoid comparisons with smoking
  2. Present irrelevant in vitro and animal data as danger
  3. Present innocuous body reactions as harm
  4. Present experimentation by youth as a proof of gateway
  5. In reviews, skew evidence to show risks
- Whatever the data, demand stricter regulation

# 1. Any chemical=danger, ignore dose, do not compare to smoking

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**Smokers who use e-cigs 'are risking harm to their lungs': Tests on 50 types of device find most contain chemicals responsible for incurable condition known as 'popcorn lung'**

**Flavouring found in e-cigarettes linked to 'popcorn lung'**

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Tuesday December 8 2015

"Smokers who use e-cigs 'are risking harm to their lungs'," the Daily Mail reports after US



Science

Science

**E-cigarettes contain flavouring chemical linked to deadly 'popcorn lung'**



**INDEPENDENT**

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**E-cigarette users could be at risk from dangerous 'popcorn lung' disease, Harvard research finds**

# Diacetyl in some flavourings

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- Popcorn lung (bronchiolitis obliterans) in popcorn plant workers, very high doses of diacetyl
- Levels in EC vapour are 100 times lower than in cigarette smoke
- Smoking was never linked to popcorn lung

## 2. Present irrelevant animal and in-vitro data as proof of risk

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- Cells exposed to nicotine concentrations 500 to 40,000 times higher than in human body: ‘... detrimental lung effects of exposure to inhaled e-Cig’

(Am J Physiol Lung Cell Mol Physiol, 2015)

- Mice exposed to an equivalent of some 200 cigs/day for 4 months developed lung problems: ‘Vapers are exposing their lungs to toxic levels of nicotine’ (Thorax 2016)

# The Oscar for the Worst Misreport 2015: Neck cells study

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- Cells in extract from smoke or EC vapour, no relevance for human exposure (cells discarded, repair and detox enzymes etc.)
- Cells still alive in EC medium after 8 weeks, but some damaged
- Smoke extract killed all cells in 24 hours: EC effects negligible compared to cigs
- Authors' and media conclusion: EC are as dangerous as cigs and cause cancer



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## E-cigarettes are NO better than regular smoking: Devices can 'cause cancer even when they're nicotine FREE'

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DON'T MISS

E-cigarettes were designed to replace conventional cigarettes

# 3. Present innocuous body reactions as a proof of risk

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- A well-known transient effect of nicotine on aortic stiffness and blood pressure with little relevance for health; same when watching a thriller or football match, sitting an exam, or drinking coffee – that actually produces a larger response of much longer duration.
- Authors studied caffeine earlier, did not claim drinking coffee is as dangerous as smoking
  - Enthusiastic worldwide approval relevant?



THE  
**Sun**

**KIDS**  
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PICTURE EXCLUSIVE



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WISLY SINGH COLLAPSES AT NOTTING HILL CARNIVAL: PAGES 4 & 5



E-CIGS SERIOUSLY DAMAGE HEART

# VAPING AS BAD AS FAGS

Small text block, likely a sub-headline or introductory text for the article on vaping.



# 4. In reviews, use the rules above and some extra ones

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- Safety reviews: Ignore doses and comparisons with smoking
- Assert risk despite the findings
- Where results show no risk, claim/invent conflict of interest

# How to show EC use undermines quitting (2016 review)

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- Use studies that recruit smokers and ask them if they used EC in the past and then follow them up. EC users will do poorly. (NRT users too, but do not report this)
- Successful quitters left the sample!
- Football scouts take talent from 100 schools. Later go to same schools and 100 new ones. Old schools now have less talent.

# 5. Present irrelevant data as alarming 'gateway' evidence



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## CDC: One in four teens are vaping



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News - UK News - e-cigarettes

## Teenagers who start vaping more likely to smoke cigarettes

## E-Cigarette Use In Youngsters Alarminglly Up

HEALTHY LIVING

## TEEN VAPING RISE MAY LEAD TO FUTURE CIGARETTE ADDICTION. STUDY SHOWS



26 January 2016

Tobacco Control  
Press Release

Teens who use ecigarettes more likely to try the real thing a year later

## Teen use of e-cigarettes continues to soar, alarming many experts

# Label experimentation as 'current use' and the cause of smoking

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- Have you used EC at least once in the past 30 days = CURRENT USER
  - Current smoker normally=> 90 cigarettes over the past 30 days
- 'EC user' and 'Current EC user' = tried EC once and never touched it again
- The same adolescents try cigs and EC
- Ignore drop in youth smoking, tell regulators and media that the above shows EC hooks kids and make them progress to smoking

# Is there a way to get researchers consider smokers?

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The key objective of relevant research is to help smokers make an informed decision

