Nicotine and public health

Peter Hajek
I have no links with any e-cigarette manufacturers
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Michael Anthony Hamilton Russell, 1932 - 2009
1960’s – 1980’s

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- Compensatory smoking
1970’s – 1980’s

- Nicotine replacement
- Nicotine chewing gum
- Nicotine nasal spray
- Nicotine inhalator
Michael Anthony Hamilton Russell, 1932 - 2009

1980’s – 1990’s

- Stop-smoking advice by health professionals
- Stop-smoking clinics and a template for stop-smoking services
People smoke for nicotine but die from tar *

Nicotine and health

- S. Glantz recently claimed new evidence proved Russell wrong, nicotine is dangerous
  - CVD from low exposure – but quotes passive smoking, not nicotine
  - Ultrasfine particles damage CV system – water vapour has ultrafine particles
  - Nicotine promotes cancers once established - in petri dish, increases or reduces angiogenesis
  - Nicotine nasal spray has acute effects on arterial function – NNS not linked to CVD
  - Nicotine is a reproductive toxicant – not disputed
New evidence in fact supports the claim of overall safety

- Lung Health Study: long-term use of NRT showed no health risk

- Extensive data on Snus users – long-term use of nicotine carries little health risk (increased risk of pancreatic cancer, if any, due to nitrosamines not nicotine)
What if nicotine is not 100% safe?

- The comparator is not nothing but smoking
- Nicotine also has positive effects which may well trump any negative effects
  - Lowers BMI
  - May prevent Parkinsons’ disease
  - May prevent ulcerative colitis
  - May prevent some types of dementia
Mike on nicotine and harm reduction

- ‘It is not so much the efficacy of new nicotine delivery systems as temporary aids to cessation, but their potential as long-term alternatives to tobacco that makes the virtual elimination of tobacco a realistic future target’

Mike on nicotine and harm reduction

- ‘Such products should be actively promoted on the open market to compete with tobacco products. They will need health authority endorsement, tax advantages and support from anti-smoking movement if tobacco use is to be gradually phased out altogether’

Mike’s advice has not been followed so far

- Mike was not hopeful about the support from tobacco control activists
- Indeed, most activists oppose safer nicotine delivery products
- Amazingly, there is also strong opposition from bodies responsible for public health
Why is there a controversy?

- If smokers switched to a harmless form of nicotine delivery, this would have a massive positive impact on public health
Yet, there is a controversy

- Tobacco control activists and medical organisations focus on risks and dangers
- Research findings are interpreted to justify the negative stance
- Goalposts are moving from dangers of nicotine - dangers of EC ingredients - luring of children - ’re-normalisation’ - rehabilitation of tobacco industry
Some tentative reasons

- The first ‘gut reaction’ to e-cigs was negative: Smoke, the word ‘cigarette’, connotations of nicotine, shadows of tobacco industry
- With information, a different picture may emerge, BUT
- First impressions may be difficult to shift and a confirmation bias develops
More tentative reasons

- Pharmaceutical industry has much to lose, was quick off the ground, and influenced early opinions (‘level playing field’ arguments of BMA and EU)

- Zealots see nicotine use, even if safe, as evil. They worry that EC will remove the reason to eradicate it
More tentative reasons

- Activists generally feel that EC ‘threaten their achievements’
- Some of the most vocal activists do not see their main purpose in preventing death and disease, but in fighting tobacco industry
- They may be aware of EC promise, but are happy to sacrifice it so tobacco industry does not achieve ‘seat at the table’ or a new respectability
Champan, BMJ 14 June 2013: Should EC be as freely available as cigarettes? No

- ‘The needs of smokers must not become the tail that wags the dog of tobacco control policy’
Moral agenda

- Public health issues are often driven by moral agenda rather than by evidence.
- Abortion, assisted dying, sexual behaviours, drug harm reduction.
- Moral beliefs are emotional and unshakeable. Evidence is not needed to discover the truth as the truth is ‘self-evident’. Evidence is just a tool to gain converts.
Calling up evidence seems the best and perhaps only defence

- Genuine problems may yet emerge regarding EC safety, effects on smoking cessation or smoking uptake by youth

- However, the ‘problems’ presented so far as reasons for regulatory restrictions have no evidence base
The key question to prohibitionists

- Common sense and many precedents suggest that safer products replace the unsafe ones rather than popularise them.

- Are you saying that if we allow continuing development of safer nicotine products, this will increase use of cigarettes?
The rest is irrelevant

- ‘Re-normalising smoking’ just means that cigarette use goes up

- ‘Undermining tobacco control’ has no meaning if cigarette use does not go up

- ‘Rehabilitating tobacco industry’ would be of concern only if cigarette use went up
Risks and benefits of liberal regulation

- If EC are allowed to continue to develop and risks emerge larger than benefits, stricter regulation based on evidence is still possible.

- Potential benefits can unfold.
Risks and benefits of over-regulation

- If EC are banned, submitted to compulsory medicinal regulation, or crippled by regulation which is stricter than that for cigarettes, some potential risks will be avoided.

- However, this will maintain market monopoly of cigarettes, and remove or diminish potential benefits, which are much more likely.
Nicotine and public health: Which way?