

Are electronic cigarettes changing the landscape of tobacco control and smoking cessation?

Prof Gerry Stimson

Emeritus professor Imperial College London

Tobacco control

- Ambition of a world without tobacco
- Abstinence focussed, zero-tolerance model
- International conventions to reduce demand and supply
- Tobacco control foresees an 'endgame' where tobacco use ceases and tobacco companies cease to exist

Tobacco control toolbox – mainly top level intervention without engagement of affected populations

Epidemiological-fiscal-behavioural model (raise price, reduce access) (think also soda, sugar, fat, alcohol taxes)

Stigma as a public health tool

- age restrictions
- advertising bans
- taxes (75-84% of UK pack price)
- graphic health warnings
- smoke-free laws
- anti-smoking campaigns
- treatments (Nicotine Replacement Therapy, pharmaceutical drugs) and cessation advice (CBT)



An additional strategy: The tobacco harm reduction proposition

- Smokers risk disease and premature death
- Most smokers say they want to stop smoking
- Many are unable or unwilling to give up nicotine
- Smoking tobacco is the most harmful delivery system
- Treatments have high failure rate (NRT c.95%)
- Providing safer delivery of nicotine enables people to continue using it but to avoid health risks of smoking
- An end to smoking but a different kind of endgame

Harm reduction in wider public health. We cope with and reduce risk:
– personal transport (safer cars, safer roads), sexual and reproductive health (eg HIV, condoms), risky hobbies (ski bindings, cycle helmets), electricity (product standards)

Tobacco harm reduction - origins

Mike Russell 1976

“Smokers cannot easily stop smoking because they are addicted to nicotine.... People smoke for nicotine but they die from the tar” 1976 BMJ 1: 1430-1433



UK Royal College of Physicians 2007
Harm reduction in smoking can be achieved by providing smokers with safer sources of nicotine that are acceptable and effective cigarette substitutes.’ p241 2007

At the time apart from NRT (and snus) no attractive and viable sources of safer nicotine



E-cigarettes – since 2007

Drivers – not Public Health but

Technology

Consumers

Private companies

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E-cigarette technology

- Battery technology
- Minutuarisation
- Chinese hi tech centres

‘Biggest disruption to tobacco consumption since Bonsack invented the cigarette rolling machine in 1880’ *

* Stimson, G. V, Thom, B., & Costall, P. (2014). Disruptive innovations: The rise of the electronic cigarette. *The International Journal of Drug Policy*

First Generation ECs (‘cigalikes’)



Second Generation ECs



Third Generation ECs (‘mods’)



Photos courtesy Lynne Dawkins and Dave Dorn - VTTV

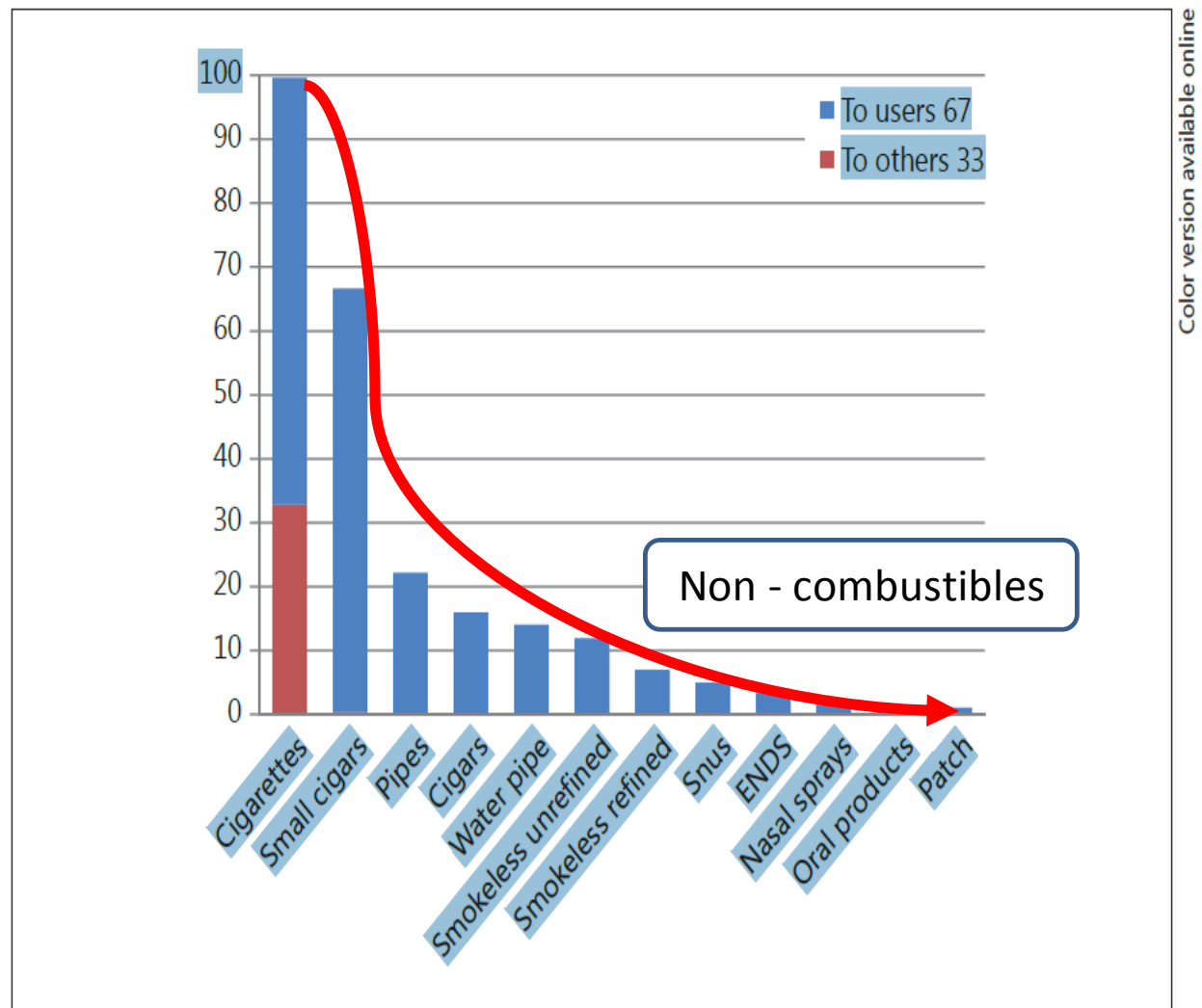
Innovation - an increasing range of non-combustible nicotine products – e-cigs, Swedish snus (banned in EU except Sweden); tobacco heating products, hybrid e-cigs with tobacco flavour



Nicotine products are not equally harmful - continuum of harm for different nicotine containing products

**Combustibles –
cigarettes – the
most dangerous
nicotine delivery
device**

Differences in harm reported by David Nutt et al using expert ranking of harms; e-cigarette evidence since replicated manifold by lab and clinical studies



ENDS = Electronic Nicotine delivery Systems

Public Health England: strong positive position on e-cigarettes

- e-cigarettes at least 95% less risky than smoking regular cigarettes (McNeill et al 2015).
- e-cigarettes pose no identified risks to bystanders
- e-cigarettes have the potential to help smokers quit smoking

* PHE is the coordinating body for public health services; provides high-level analysis and positions.

Royal College of Physicians – on relative risk



"Although it is not possible to precisely quantify the long-term health risks associated with e-cigarettes, the available data suggest that they are **unlikely to exceed 5% of those associated with smoked tobacco products, and may well be substantially lower than this figure**".

(Section 5.5 page 87)

Royal College of Physicians – on public health and harm reduction



"However, **in the interests of public health it is important to promote the use of e-cigarettes, NRT and other non-tobacco nicotine products** as widely as possible as a substitute for smoking in the UK."

(Recommendations, original emphasis).

E-cigarettes – since 2007

Drivers

Technology

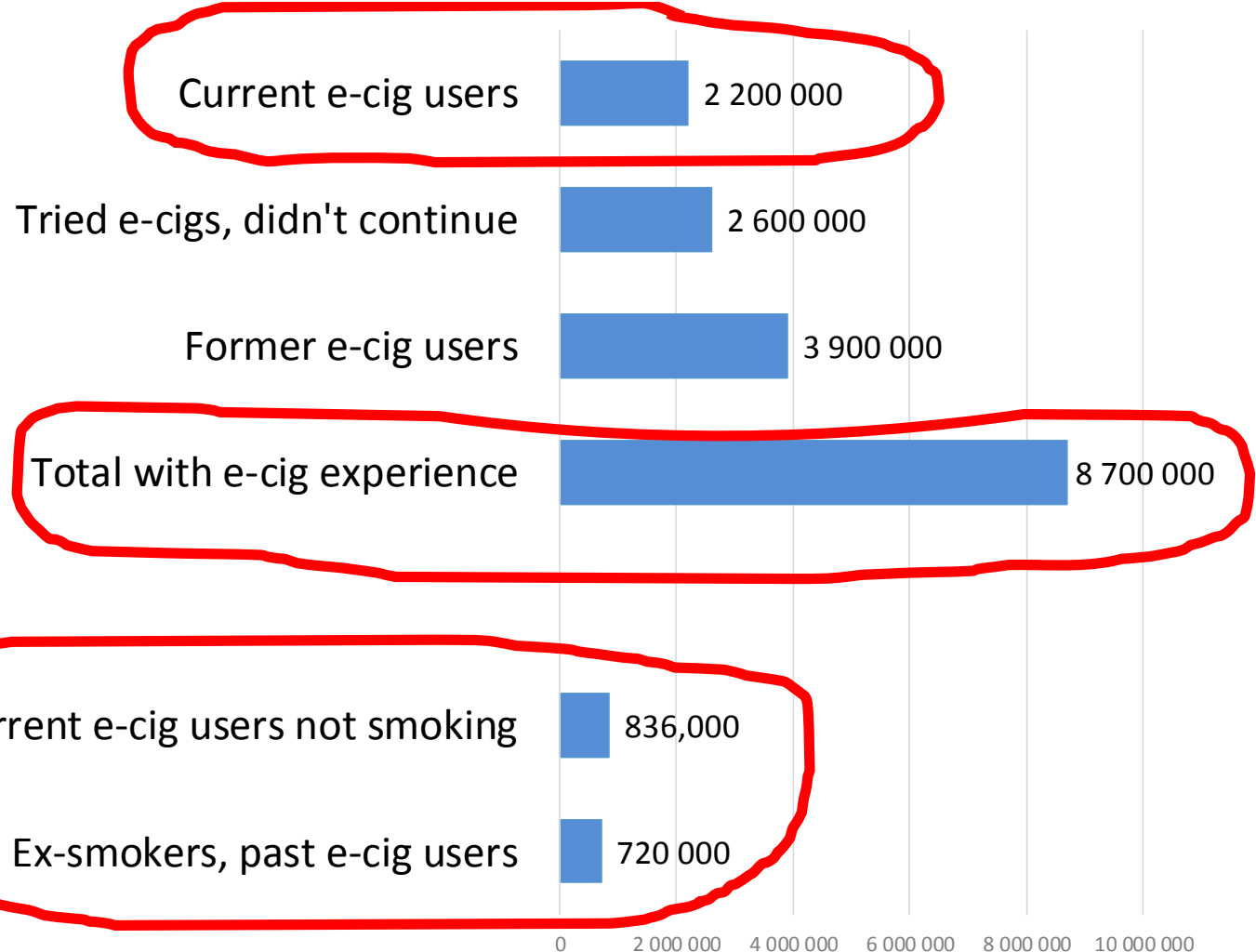
Consumers

Companies

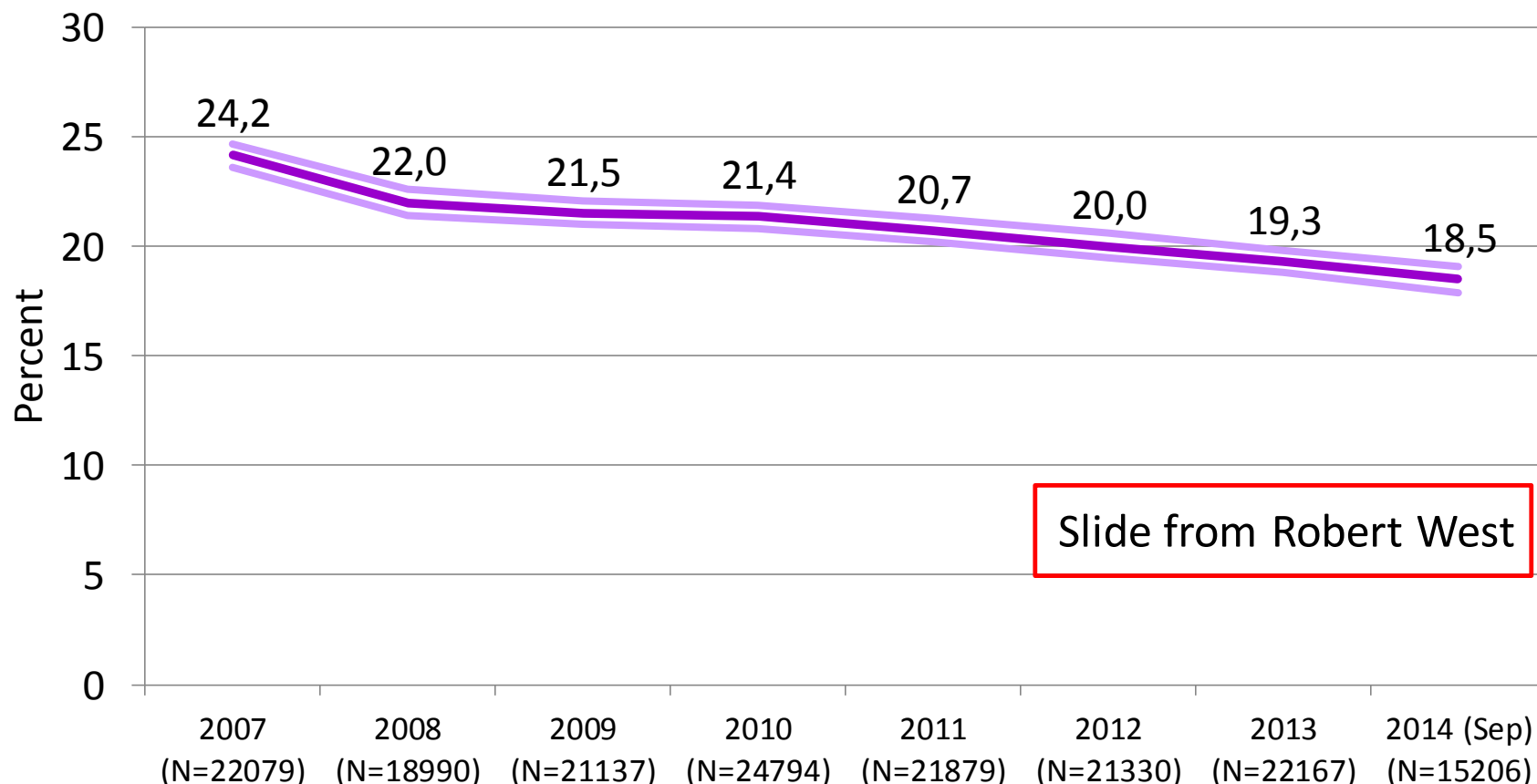
Rapid rise of e-cigarette use in Britain 2015

Office for National Statistics

Unlikely that any Public Health initiative could have so much impact in such a short time, in terms of
reach - 8.7 m
have tried e-cigs;
converts – 2.2m
current users;
success 1m+ e-cig
users who no longer smoke
cigarettes



Cigarette smoking prevalence falling in England while e-cig use increases

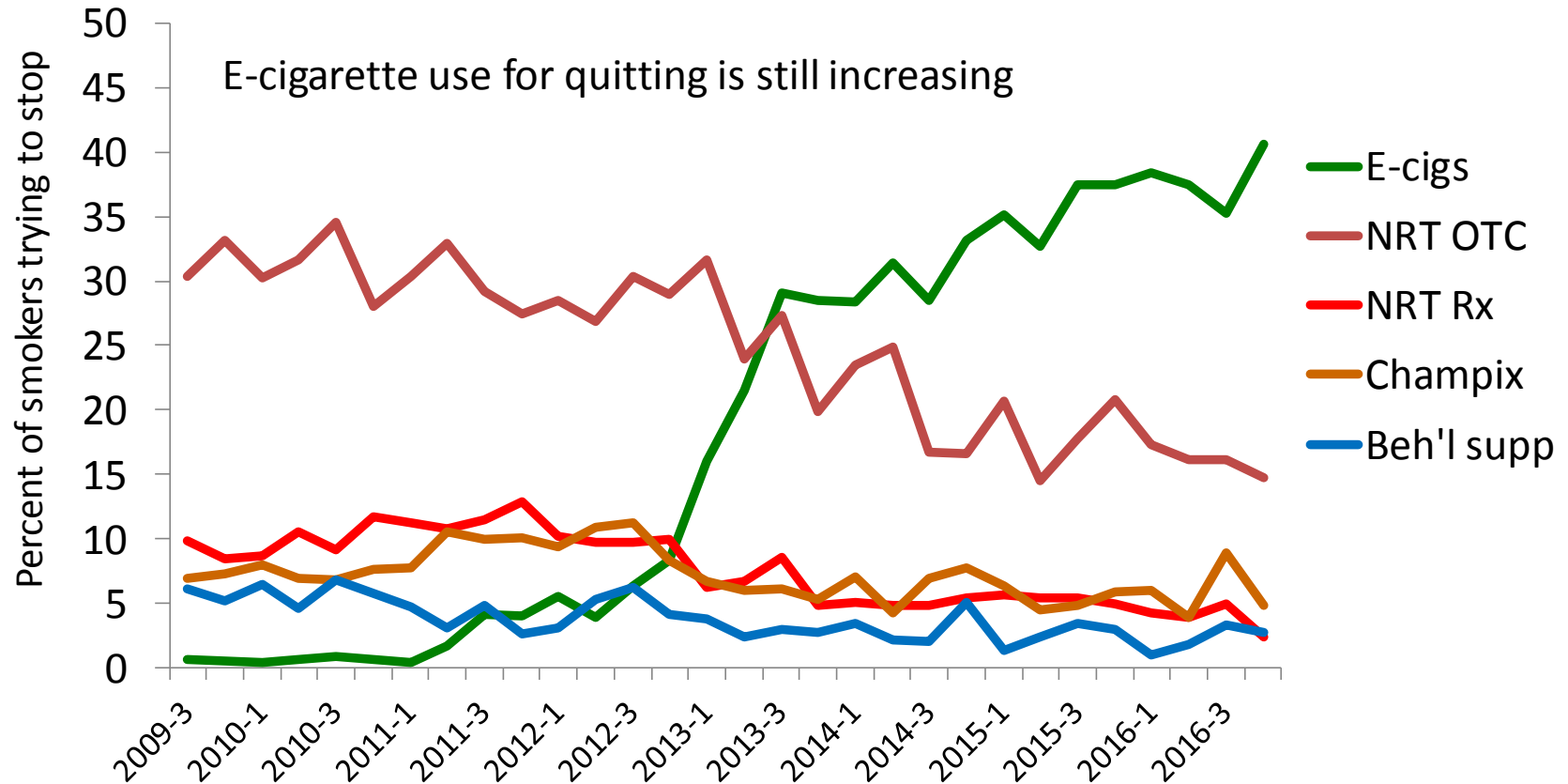


Slide from Robert West

Base: All adults

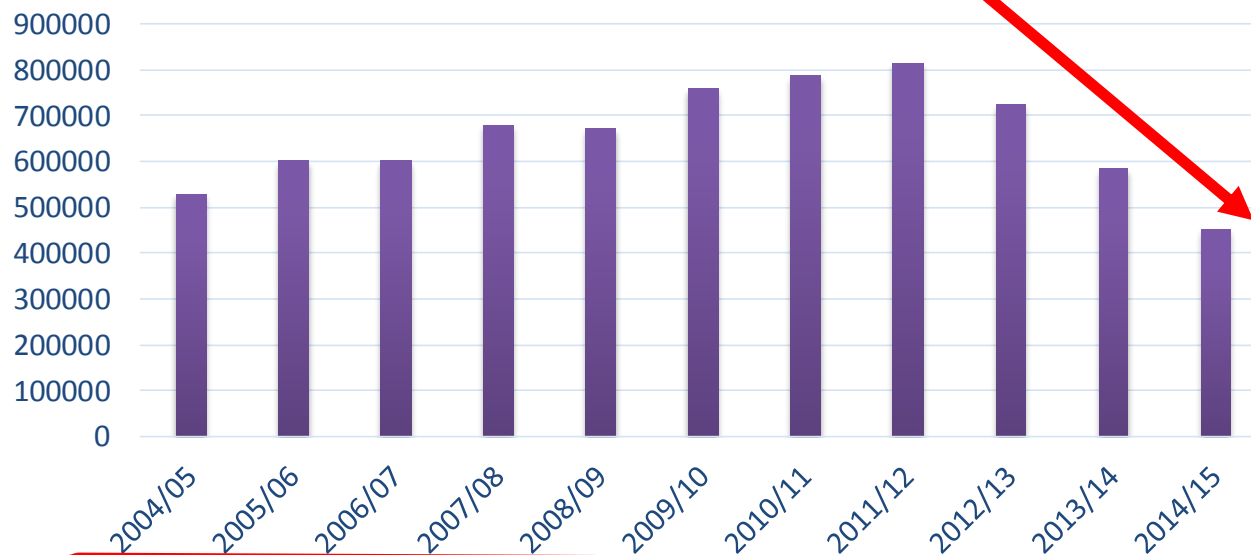
Graph shows prevalence estimate and upper and lower 95% confidence intervals.
England

E-cigs the most popular quitting aid



N=12244 adults who smoke and tried to stop or who stopped in the past year; method is coded as any (not exclusive) use

Smoking cessation services lose business - customers decline by 45% since 2011-12



**Total cost
2014-5***

£118m**

**Cost per
successful
quit**

c £513**

*Cost per quit increases as clients decrease; service cost £235 in 2012-13, £344 in 2014-15.

**Prescribing costs est. based on 2013-14 reduced by £10m lower in 2014-15 England

Clients [i] **450,582**

Successful quits [ii] **229,688**

Total cost

Per successful quit

SSS service [iii] **£79m** **£344**

Prescribing (c 50% NRT)[iv] **(£49m) £39m adjusted** **(£212) £169 adjusted**

Total **(£128m) £118m adjusted** **£513**

[i] Setting quit date

[ii] Quit smoking at 4 week follow-up, not smoked since two weeks after the quit date

[iii] 2014-15 Table 4.12

[iv] 2013-14 Table 4.10. data unavailable for 2014-15. Will be less in 2014-15

Source: Health and Social Care Information Centre, Statistics on NHS Stop Smoking Services in England; April 2014 to March 2015; April 2013 to 31 March 2014. Missing data = costs are understated

Self-help, mutual help

- Consumer led health revolution
- DIY approach to switching from smoking
- One UK e-cig social forum has **10 000 visits a day**
- Vapers helping smokers - Chris Russell
[//substanceuseresearch.org/christopher-russell-ph-d/](http://substanceuseresearch.org/christopher-russell-ph-d/)
- Doing exactly what PH experts extol:
WHO Ottawa Charter on Health Promotion - individuals must become empowered to control the determinants that affect their health
- Vapers are experts, advocates



The *Ottawa Charter for Health Promotion* WHO, 1986

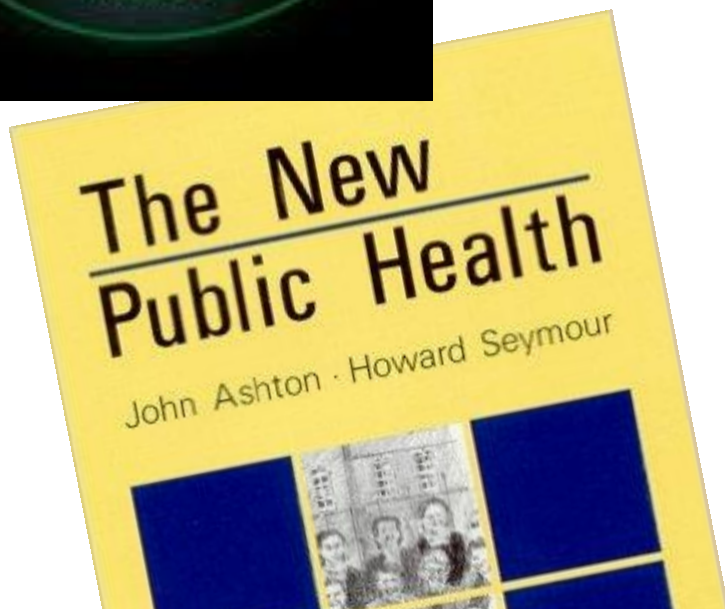
A public health vision

Strategies for health promotion

Advocate:

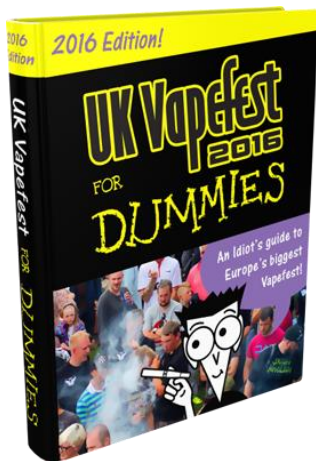
Enable: ... individuals must become empowered to control the determinants that affect their health

Mediate: ...success will depend on the collaboration of all sectors of government (social, economic, etc.) as well as independent organizations (media, industry, etc.).



A change in the way nicotine is viewed and used? From 'quitting' to 'switching'; from 'addiction' to 'pleasure'

- 'Smoking cessation' repositioned from medical 'treatment' to pleasurable experience: Sarah Jakes <http://nnalliance.org/blog/39-the-pleasure-principle>
- From stigma to guilt-free enjoyment of nicotine
- Vaping - a transformation in personal identity; also a hobby (gadgets etc)
- Vaping is fun: Vapefest (there are no NRTfests)



E-cigarettes – since 2007

Drivers

Technology

Consumers

Private companies

E-cigarette makers

- Initial innovations and manufacture in China
- China + independents + tobacco companies with e-cig interests
- Shift to innovation within tobacco companies
- R & D investment: Phillip Morris International \$3bn investment in safer nicotine device
- Tobacco Co's become Nicotine Co's (?) – a different kind of endgame?

The New Tobacco Harm Reduction – a success for the health of the public without help (and some hindrance) from Public Health

E-cigarette makers, vaping stores, vaping forums and vapers are the new front line in helping people switch from smoking (Resources + Raise awareness + Make contact)

Public health objectives delivered without the involvement of Public Health professionals.

At no cost to the taxpayer

A new landscape of 'smoking cessation'

Enabling change: provide resources; make contact; raise awareness, provide information

Research and development, science, product innovation, manufacturing marketing: e-cigarette/tobacco companies

Front-line 'staff' and 'outreach workers': c1 m vapers who have stopped smoking

'Smoking cessation advice centres': 1500-2000 dedicated vape shops; 1500-2000 stores with significant trade + retail chains

Self-help and mutual help (peer education); Social media, internet forums, websites

COST TO STATE
BENEFIT *

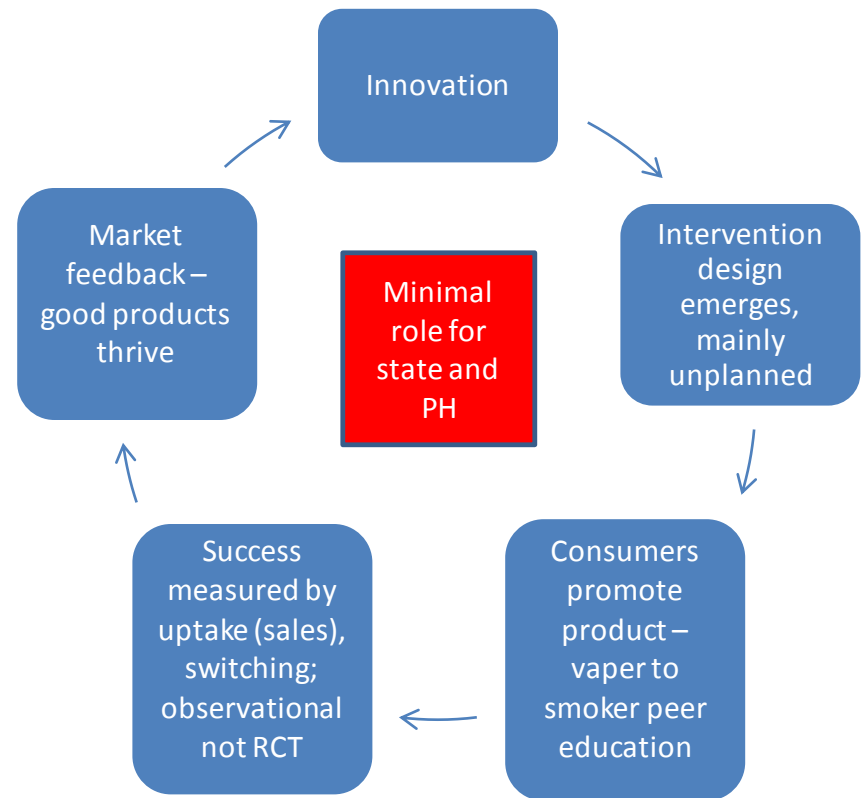
£0
£62bn

* 836,000 people use e-cigarettes and no longer smoke. NHS value a "successful quit" = £74,000, based on average 1.2 life yrs saved @ £60,000 per life year.

Public Health intervention model

Invent, develop idea
Raise funds
Formative work
Design intervention
Deliver intervention
Observe changes in population

Consumer + market model



Rethinking public health

- Pleasure + consumer driven + market based harm reduction/public health
- Other examples of public health achievements not driven by Public Health experts?

Thank you

