

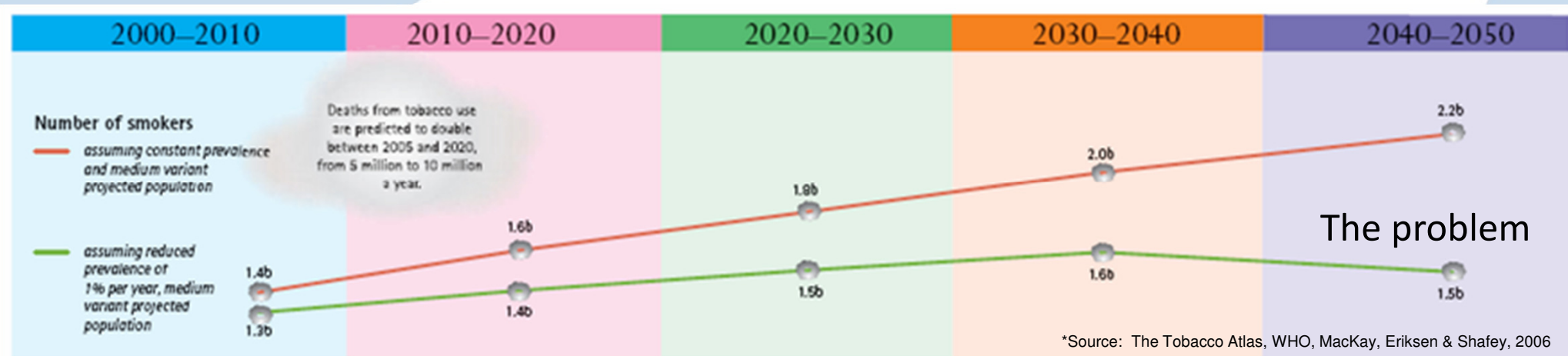
E-Cigarettes: What's the Real Medical Innovation Breakthrough?

Dr Sudhanshu Patwardhan, MBBS, MS, MBA
Senior International Engagement Manager, Nicoventures

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nicoventures

One of the greatest public health opportunities of all time?



The solution?

- Nicotine without tobacco smoke
- New nicotine products, regulated for safety and quality

Can e-cigarettes help reduce EU smoking prevalence?



E-Cigarette Sales to Exceed Traditional Cigarettes by 2021
Wells Fargo, 2013

Source: Eurobarometer 2012. http://ec.europa.eu/health/tobacco/docs/eurobaro_attitudes_towards_tobacco_2012_en.pdf accessed on 20/06/2014

E-cigarettes are increasingly effective and popular as a tobacco cigarette substitute

- An online survey in 10 European languages of more than 19,000 users from around the world reported
 - Electronic cigarettes may be an effective substitute for smoking even in highly dependent subjects who are heavy smokers.
 - Significant benefits among users in physiologic functions and in some disease conditions.¹
- A randomised controlled trial in New Zealand showed comparable cessation outcomes for e-cigarettes and nicotine patches²
- A recent UK study reported that among smokers trying to stop without any professional support, those who use e-cigs are more likely to report abstinence³ than those who use licensed product bought OTC or used no aid to cessation.

1. Characteristics, Perceived Side Effects and Benefits of Electronic Cigarette Use: A Worldwide Survey of More than 19,000 Consumers. Farsalinos et al, April 2014

2. Electronic cigarettes for smoking cessation: a randomised controlled trial. Bullen et al The Lancet Sept 2013.

3. Real-world effectiveness of e-cigarettes when used to aid smoking cessation: a cross-sectional population study. Robert West et al. Addiction, May 2014

E-cigarette puzzle - the key pieces

- What are e-cigarettes and how do they work?
- Some advances:
 - Speed of nicotine delivery
 - Mimicking smoking experience
- Remaining challenges:
 - Providing accurate information to smokers
 - Getting product quality and safety regulations right
 - Monitoring the market place for misuse and unintended consequences

No tobacco. No Burning.

A “cleaner” nicotine alternative for smokers to switch to?

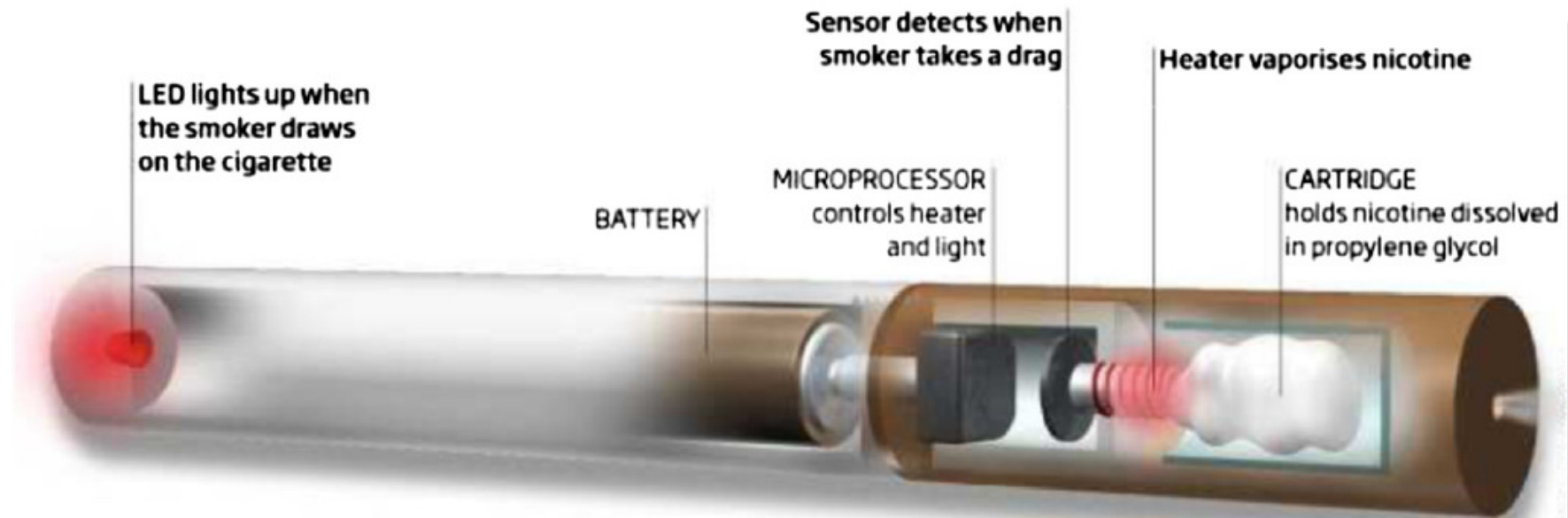


Diagram source: A fresh look at tobacco harm reduction: the case for the electronic cigarette. Polosa et al. Harm Reduction Journal 2013

Nicotine in the vapour gives the throat sensation

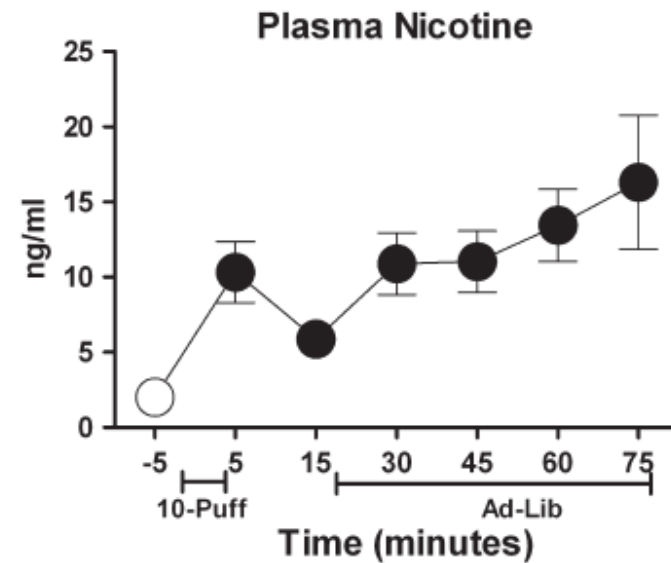
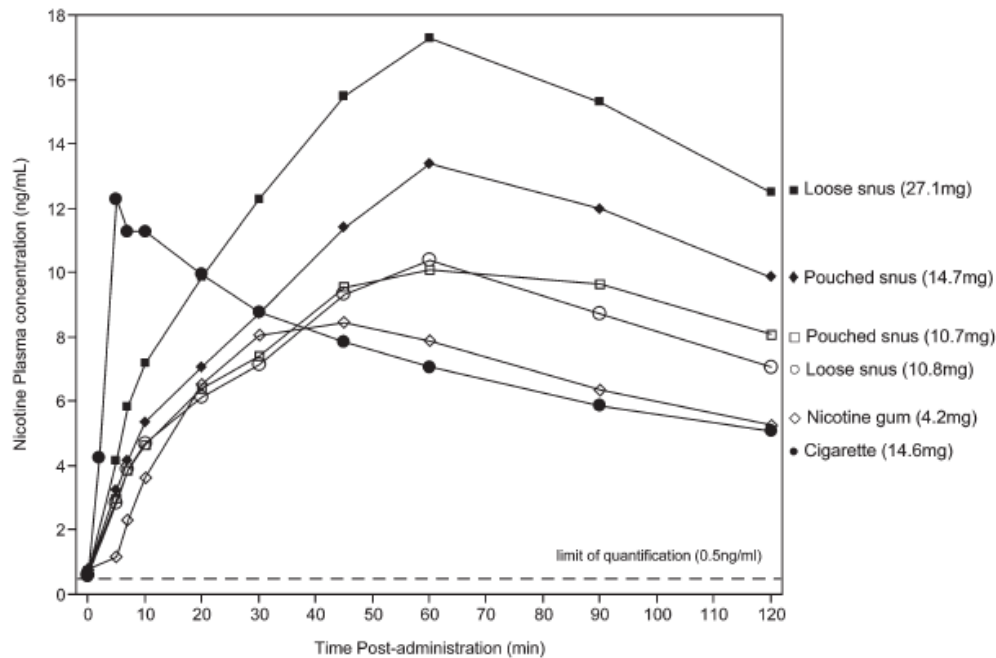


Nicotine in aerosol can potentially go beyond the throat



An aerosol is a suspension of fine solid particles or liquid droplets in a gas

Products deliver nicotine at different speeds and levels



Determination of Nicotine Absorption from Multiple Tobacco Products and Nicotine Gum. Digard et al, Nicotine and Tobacco Research, Advanced access published May 2012

Electronic Cigarettes: Effective Nicotine Delivery After Acute Administration, Vansickel et al, Nicotine and Tobacco Research, January 2013

Maximising e-cigarettes' public health potential



Potential to reduce smoking related diseases....safety concerns should be considered relative to significant health risks from tobacco..

..flaws in e-cigarette labelling and design...poor shelf life of cartridges...health implications of inhaling some of the flavourings and other impurities are uncertain...

Generating a lot of media debate

The arguments for and against the e-cigarette

28 April 2014 Last updated at 07:52 BST

The number of people using electronic cigarettes in the UK has tripled over the past two years. But the British Medical Association says it is too early to say whether they are better than traditional cigarettes. Graham Satchell reports.

Read more

E-cigarette users in UK have 'tripled' in two years

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Are e-cigarettes bad for you

E-cigarettes better than patches and gum as aid to kick the habit

CHARLIE COOPER
SOCIETY EDITOR

Public health experts have been mixed. Some have hailed the devices, which could help smokers quit, as a better alternative to patches and gum. Others have warned that they could be addictive and cause lung damage.

E-cigarettes are best bet for smokers wanting to quit

Rosamund Bennett
Society Correspondent
Alex Ralph

Electronic cigarettes should be prescribed by the NHS, scientists have said. After evidence showed them to be far more effective in helping people to quit than over-the-counter nicotine patches, gum or inhalers, researchers at University College London followed 5,000 smokers who were attempting to stop over five years. Those using e-cigarettes were 60 per cent more likely to succeed than those using other common methods. Only the little-used NHS Stop Smoking Service had better results. The findings will be a boost to e-cigarette manufacturers, which have lobbied for their products to be prescribed by the NHS. The study found those using the counter patches or exercising will power had the lowest rate of success. Those using e-cigarettes, patches prescribed by their doctor or other prescribed nicotine had a 60 per cent higher rate of success. The small number who used the NHS Stop Smoking Service had a 70 per cent success rate.

E-cigarettes: miracle or health risk?

More than two million people in the UK get their nicotine hit via electronic cigarettes. But as 'vaping' replaces smoking – and is enthusiastically marketed by the beleaguered tobacco giants – no one is yet sure how safe it actually is



Jon Henley
The Guardian, Monday 5 May 2014 17.45 BST

Jump to comments (830)

Sweet e-cigs 'being targeted at children'

By Luke Salkeld

E-CIGARETTES with sweet flavours are being targeted at children and could get them hooked on nicotine, it has been claimed. The devices do not contain tobacco, so are not covered by legislation which has banned smoking in enclosed places across the UK. Instead an electronic inhaler vapourises liquid nicotine. They are currently legally sold to under-18s, and are often cheaper than traditional cigarettes, with flavours including strawberry, chocolate and vanilla.

tar found in normal cigarettes, experts fear they could encourage young people to start smoking regular cigarettes.

Last month the Welsh government proposed banning the use of e-cigarettes in public places amid fears that they could normalise smoking among the young.

agers who use e-cigarettes are six times more likely to try tobacco.

Dr Iain Murray, a spokesman for the British Medical Association, said: 'They have become commonplace in the playground. Ultimately these devices do contain nicotine and young people smoking them are developing a habit which they could potentially be stuck with for life.'

He added: 'We want to see legislation ban-



A customer at the Vape Lab in Shoreditch, London, samples the wares. Photograph: Sean Smith for the Guardian

ncoventures

Our approach to e-cigarettes' product regulation

- Underpinned by product quality and safety standards
- Include:
 - Use of pharmaceutical grade nicotine and diluents in e-liquid
 - Toxicology based risk assessment approach for e-liquid ingredients and aerosol chemistry
 - Working towards robust quality assurance systems
 - Compliance with existing directives for electrical testing, battery testing, child resistance, and accurate labelling

Summary

- It is the smoke from burning cigarettes, not the nicotine, that causes cancer, heart disease and lung disease.
- E-cigarettes mimic smoking and have the potential to deliver nicotine effectively without the accompanying smoke toxicants, thus offering a safer alternative to conventional cigarettes.
- The use of pharmaceutical grade nicotine in the e-liquid, a toxicological assessment of ingredients and vapour contents, and good manufacturing practice, are fundamental to meeting smokers' and regulators' expectations of quality and safety from e-cigarettes.
- Although there is little evidence currently regarding normalisation of smoking due to e-cigarette use and e-cigarettes acting as a gateway into smoking, we need to ensure responsible marketing of the products to smokers and continue to monitor how these products are used in the society.