



SAHMRI

Transforming research into health

E-cigarettes: separating the science from the hype

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Background

- Currently an issue dividing the tobacco control community
- E-cigarettes have received rapid market penetration despite many unanswered questions
- Policy makers around the world are under pressure



Overview

- What are e-cigarettes?
- Prevalence of use
- The hype: e-cigarette marketing
- The science
- Royal College of Physicians report
- What does all this mean for patients in Australia?



What are e-cigarettes?

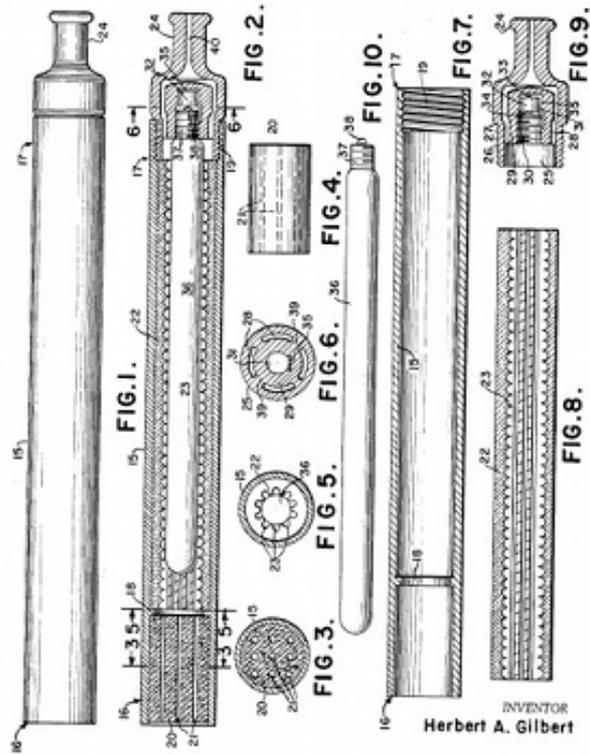
Aug. 17, 1965

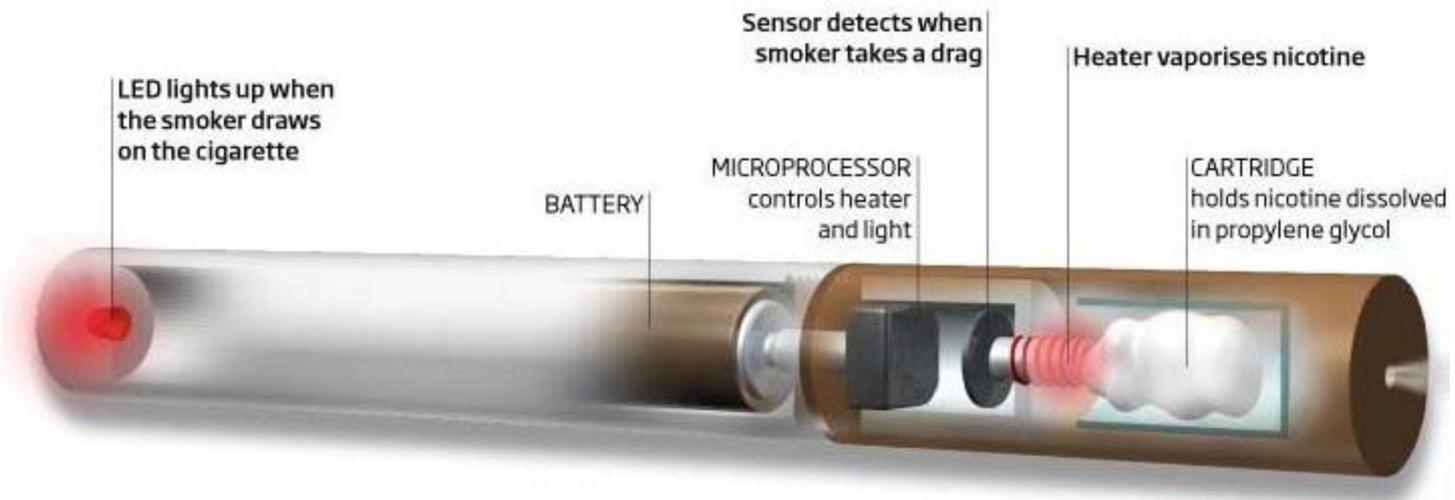
H. A. GILBERT

3,200,819

SMOKELESS NON-TOBACCO CIGARETTE

Filed April 17, 1962















Fluids contain

- Many come premixed from China, but some are now made in the US and Europe
- Origins and quality of the ingredients are often unknown
- Fluids* may contain:

- ✓ Nicotine (in varying concentrations)

- ✓ Humectants: propylene glycol (or vegetable glycerin) for vapor production

- ✓ Flavorings (tobacco, menthol, coffee, vanilla, fruit, cotton candy, etc.)

*Metal particles have also been found in the fluids



Vapour

AEROSOL COMPOSITION

- Propylene glycol
- glycerin
- Flavorings (many)
- **Nicotine**
- **NNN**
- **NNK**
- NAB
- NAT
- **Ethylbenzene**
- **Benzene**
- P,m, xylene
- **Toluene**
- **Acetaldehyde**
- **Formaldehyde**
- **Naphthalene**
- **Styrene**
- **Benzo(b)fluoranthene**
- Chlorobenzene
- **Crotonaldehyde**
- **Propionaldehyde**
- Benzaldehyde
- Valeric acid
- Hexanal
- Fluorine
- Anthracene
- Pyrene
- Acenaphthylene
- Acenaphthene
- Fluoranthene
- **Benz(a)anthracene**
- **Chrysene**
- Retene
- **Benzo(a)pyrene**
- **Indeno(1,2,3-cd)pyrene**
- Benzo(ghi)perylene
- **Acetone**
- **Acrolein**
- Silver
- **Nickel**
- Tin
- Sodium
- Strontium
- Barium
- Aluminum
- **Chromium**
- Boron
- Copper
- **Selenium**
- **Arsenic**
- **Cadmium**
- Silicon
- Lithium
- **Lead**
- Magnesium
- Manganese
- Potassium
- Titanium
- Zinc
- Zirconium
- Calcium
- Iron
- Sulfur
- Vanadium
- **Cobalt**
- Rbhidium

Compounds in **yellow** are from FDA 2012,
**Harmful and Potentially Harmful
Substances – Established List**

E-cigarette legislation

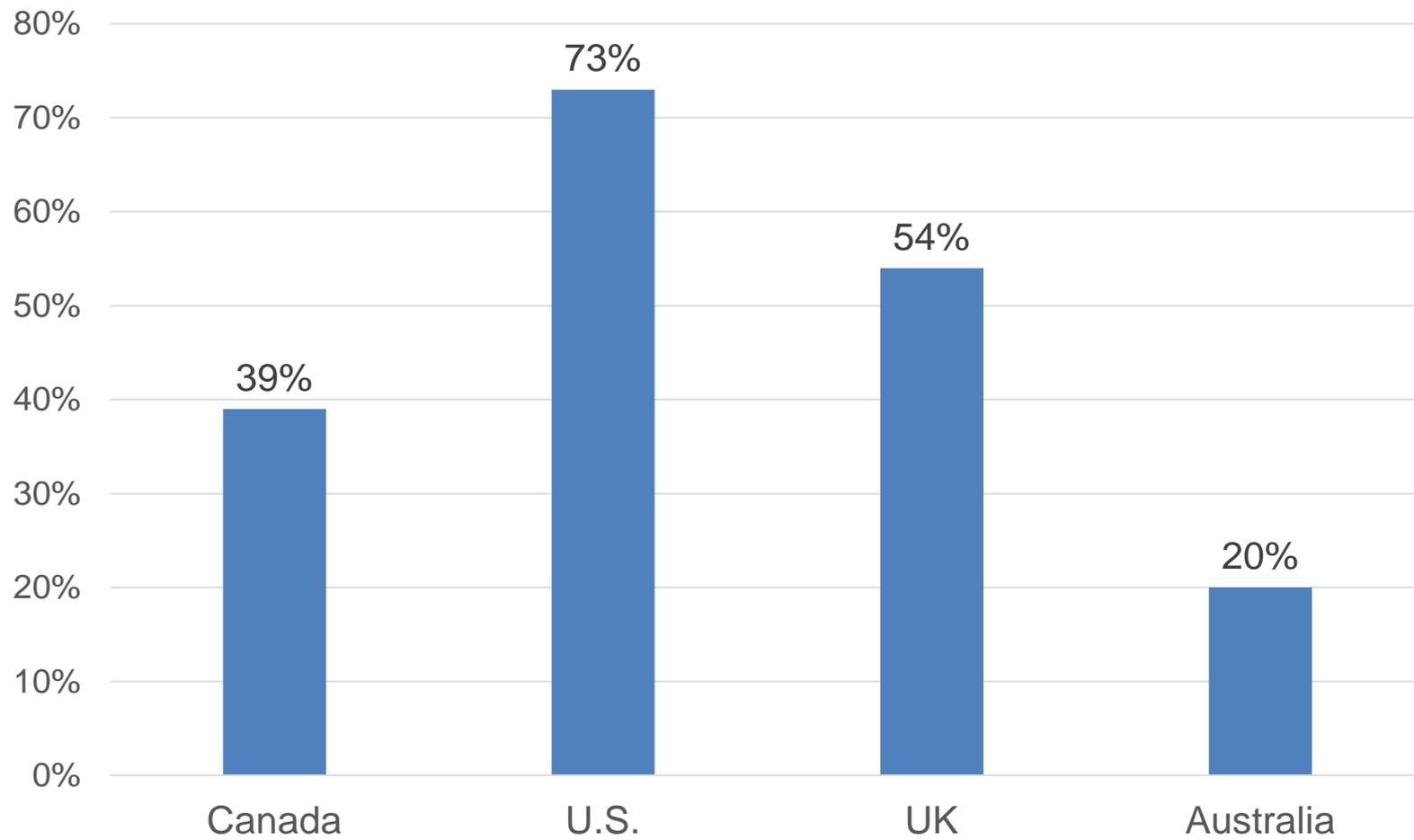
E-cigarette legislation

- The supply of e-cigarettes containing nicotine in Australia is illegal
- In Australia, generally, if devices look like cigarettes then they are treated as cigarettes, and the same rules with their marketing and use apply
- In the UK there are few restrictions on the marketing and sale of e-cigarettes
- E-cigarettes have been banned in Canada
- Greater awareness of e-cigarettes is apparent in countries where they are permitted

How prevalent are e-cigarettes?

Awareness of e-cigarettes

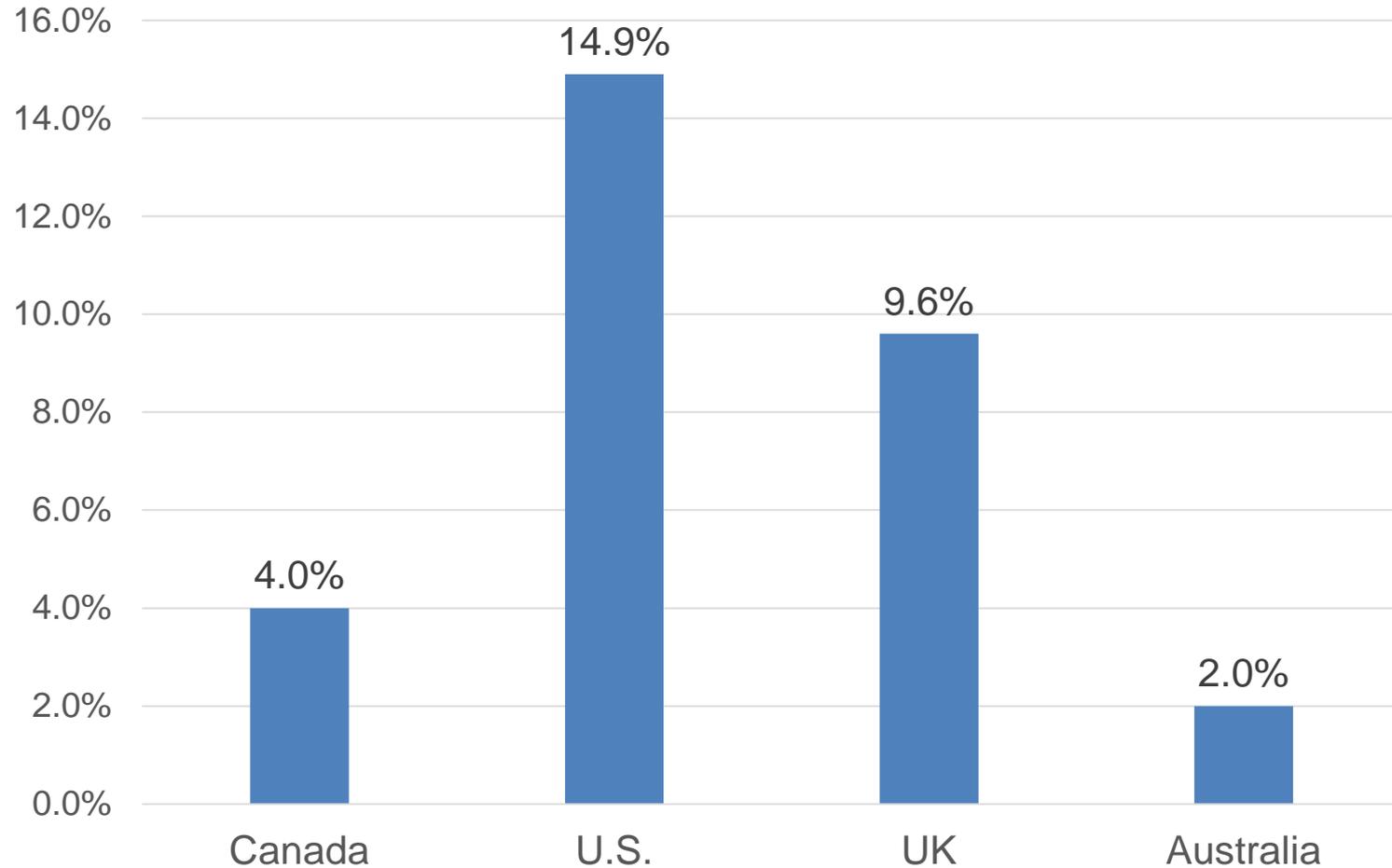
(among smokers and ex-smokers)



Source: Adkinson et al, Am J Prev Med 2013

Tried e-cigarettes

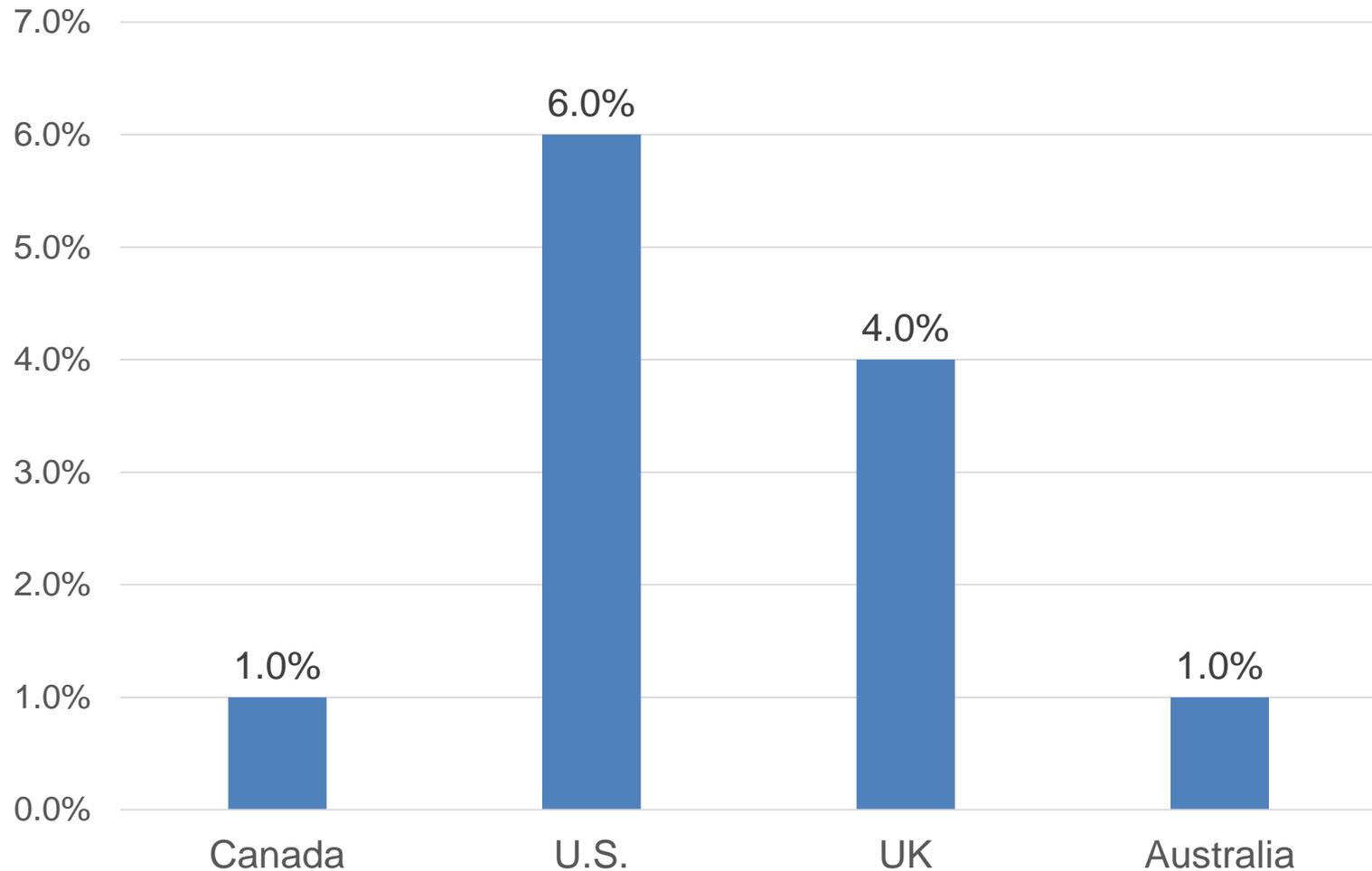
(among smokers and ex-smokers)



Source: Adkinson et al, Am J Prev Med 2013

Current users of e-cigarettes

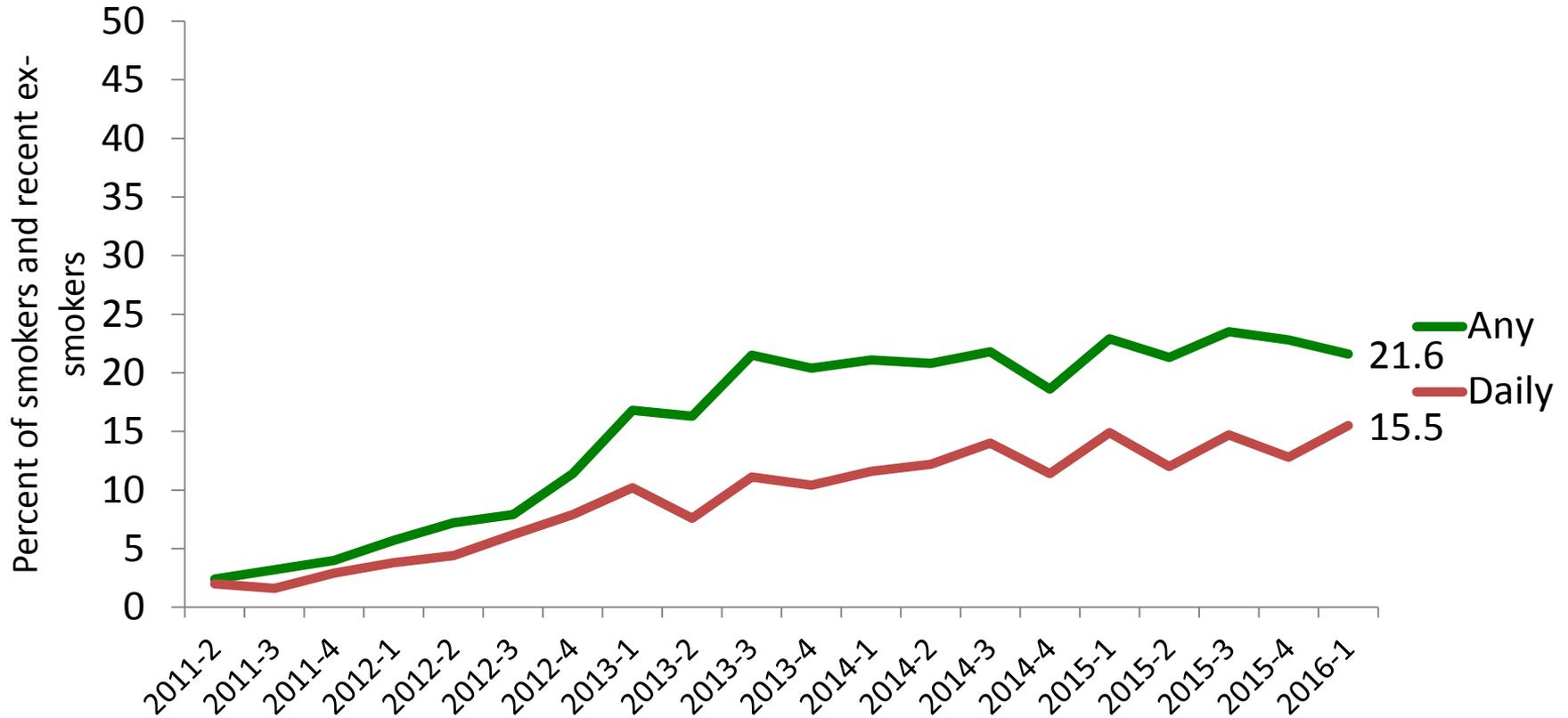
(among smokers and ex-smokers)



Source: Adkinson et al, Am J Prev Med 2013

Current user of e-cigarettes - UK

(among smokers and ex-smokers)



Source: www.smokinginengland.info/latest-statistics



**The hype:
e-cigarette marketing**

E-cigarette Marketing



Rise from the Ashes

blu ELECTRONIC CIGARETTE

*Freedom to Smoke Anywhere *No Tobacco Smoke. Only Vapor. *Flavors Made in the U.S.A.

Keep the conversation fresh with blu electronic cigarettes and smell as good as you feel.

blucigs.com

18+ ID required. blu e-cigs are not a smoking cessation product and have not been evaluated by the Food and Drug Administration, nor are they intended to treat, prevent or cure any disease or condition.

E-cigarette Marketing

ALL OVER AMERICA...
**MORE SCIENTISTS AND EDUCATORS
 SMOKE KENT with the MICRONITE FILTER**
than any other cigarette!

BRAND PREFERENCE OF AMERICAN SCIENTISTS WHO SMOKE

KENT	15.3%
BRAND Y	8.8%
BRAND W	7.8%
BRAND V	7.8%
BRAND U	7.3%

BRAND PREFERENCE OF AMERICAN EDUCATORS WHO SMOKE

KENT	10.2%
BRAND Y	8.0%
BRAND W	7.7%
BRAND V	7.7%
BRAND U	7.6%

KENT CIGARETTES
 NEW EXCLUSIVE MICRONITE FILTER
 KING SIZE

REGULAR SIZE, KING SIZE
 OR CRUSH-PROOF BOX

For good smoking taste,
 it makes good sense to smoke **KENT**

A PRODUCT OF P. LORILLARD COMPANY FIRST WITH THE FINEST CIGARETTES THROUGH LORILLARD RESEARCH © 1965 P. LORILLARD CO.

blu ELECTRONIC CIGARETTES

Take back your freedom with blu eCigs®, the new alternative to traditional cigarettes.

- Smoke Virtually Anywhere
- No Tobacco Smoke, Only Vapor
- Flavors Made in the U.S.A.

Now Available in Retail Stores Nationwide

NOT FOR SALE TO MINORS. blu eCigs® electronic cigarettes are not a smoking cessation product and have not been evaluated by the Food and Drug Administration, nor are they intended to treat, prevent or cure any disease or condition. ©2012 LOEC, Inc. blu™ are trademarks of Lorillard Technologies, Inc.

Photography by Francesco Carrazzini

blucigs.com/store-locator/

E-cigarette Marketing



**SLIM. CHARGED.
READY TO GO.**

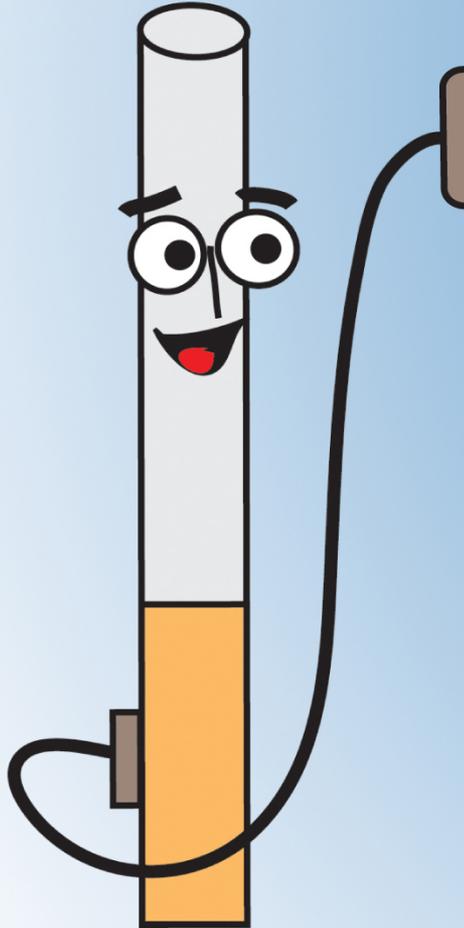
**AVAILABLE
NATIONWIDE!**

Visit us at blucigs.com/store-locator

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Marketing: Healthier choice



GENERAL HEALTH BENEFITS OF SWITCHING TO THE ELECTRIC CIGARETTE

- ♥ HEALTH BENEFITS SAME AS WHEN YOU QUIT SMOKING
- ♥ NO MORE SMOKER'S COUGH AND PHLEGM
- ♥ SENSE OF SMELL IS BACK
- ♥ BETTER PHYSICAL STAMINA AND CARDIO
- ♥ NO MORE WHEEZING AND TIGHTNESS IN CHEST



K. Nacheff

Marketing: avoid smoking bans



The advertisement is split into two main sections. On the left, a woman with long dark hair, wearing a grey sleeveless dress, is sitting in an airplane cabin. She is smiling and resting her chin on her hand. A "No Smoking" sign is visible on the wall behind her. On the right, a dark blue background contains white text and a button. The text reads "Find Out How Megan Can..." followed by "Smoke" and "Anywhere" in large, bold, underlined letters. Below this is an orange button with the text "Learn More" and a mouse cursor icon. At the bottom right, it says "New Smoking Technology Featured On:" followed by logos for CNN, NBC, USNews, and Scientific American. In the bottom left corner, there is a red-bordered box with the text "Cigarette Technology Alert" and an image of a cigarette.

Find Out
How Megan Can...

Smoke

Anywhere

Learn More

New Smoking Technology Featured On:

CNN NBC USNews SCIENTIFIC AMERICAN

Cigarette Technology Alert

Marketing: avoid smoking bans

DEAR SMOKING BAN,



blu ELECTRONIC CIGARETTE

Take back your freedom to smoke anywhere with blu electronic cigarettes. blu produces no smoke and no ash, only vapor, making it the smarter alternative to regular cigarettes. It's the most satisfying way to tell the smoking bans to kiss off. Okay, maybe the second-most satisfying way.



New blu Smart Pack

blucigs.com

18+ only. CALIFORNIA PROPOSITION 65 Warning: This product contains nicotine, a chemical known to the state of California to cause birth defects or other reproductive harm.

Marketing: delay quitting



**Considering
all I'd heard,
I decided to
either quit
or smoke True.
I smoke True.**

**The low tar, low nicotine cigarette.
Think about it.**

Warning: The Surgeon General Has Determined
That Cigarette Smoking Is Dangerous to Your Health.

King Regular: 11 mg. "tar", 0.6 mg. nicotine; 100's Menthol: 13 mg.
"tar", 0.7 mg. nicotine av. per cigarette, FTC Report Nov. '75.

© Lorillard 1976



**DON'T QUIT...
SWITCH TO BLU**

blu is the smart choice for smokers wanting a change. Take back your freedom to smoke when and where you want without ash or smell. blu is everything you enjoy about smoking and nothing else. Nobody likes a quitter, so make the switch today.

Visit blucigs.com

* New blu Smart Pack

PREMIUM ELECTRONIC CIGARETTE

18+ only. CALIFORNIA PROPOSITION 65 - **Warnings:** This product contains nicotine, a chemical known to the state of California to cause birth defects or other reproductive harm.

If this is your first visit, be sure to check out the [FAQ](#) by clicking the link above. You may have to [register](#) before you can post: click the register link above to forum that you want to visit from the selection below.

AussieVapers | The original Australian e-cigarette community

Welcome to the AussieVapers | The original Australian e-cigarette community.

General E-Cigarette Discussion forums

Title	Threads	Posts	Last Post
E-Cigarette / Vaporization Discussion Forum (28 Viewing) General discussion of e-cigs and other vaping devices belongs here. Anything and everything goes.	4,970	122,527	Whats the nice postman have... by merexy 16-09-14 08:04 PM
E-Cigarette / Vaporization: Hardware Discussion (24 Viewing) Discussion encompassing all of the hardware you need to get you started or keep you going. Atomisers, cartomisers, personal vaporisers, rebuildables, wick, SS mesh and more!			
E-Cigarette / Vaporization: eJuice / Nicotine / E-Liquids (10 Viewing) Discussion encompassing everything and anything in regards to your favorite Juices and juice vendors!			
New Vapers Forum (10 Viewing) New to vaping? Just starting out or looking to start and have no clue where to begin? This is the section for you. Tips, tricks guides and information for users new to electronic cigarettes. New member introductions also go into this section.			
E-Cigarette / Vaporization: Political and Media discussion (4 Viewing) For articles, videos and general information regarding the current state of E-Cigarette hardware, juices, accessories and more within Australian and international borders.			

FORUMS MEMBERS

VAPING UNDERGROUND™

RECENT POSTS

\$4.99 per bottle

SHOP 150+ FLAVORS

WHOLESALE NICOTINE, eLIQUIDS and SUPPLIES

Premium Quality Nicotine PG, VG, & Flavorings
Plastic & Glass Bottles, Lab Supplies & more...

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+ No minimums

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E-Cigarette / Vaporization: Expert Reviews, technical discussion and DIY

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ANNOUNCEMENTS Vaping Underground Forum Announcements Will Be Logged Here.

Forum Announcements
9 490

Latest: 100,000 POSTS IN JUST OVE...
lordmage, Today at 3:45 AM

FORUM RULES Forum rules and guidelines are found here!

FORUM STATISTICS

Discussions:	17,329
Messages:	108,428
Members:	9,164
Latest Member:	Aspenvalleyvapes

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The science



Latest evidence – two main claims

1. E-cigarettes increase quitting

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- The efficacy of e-cigs as a cessation tool has not been fully established

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2. They are safer in the long-term

Latest evidence – two main claims

1. E-cigarettes increase quitting

- The efficacy of e-cigs as a cessation tool has not been fully established

2. They are safer in the long-term

- The health risk of long-term use is unknown although probably less than that of smoking cigarettes

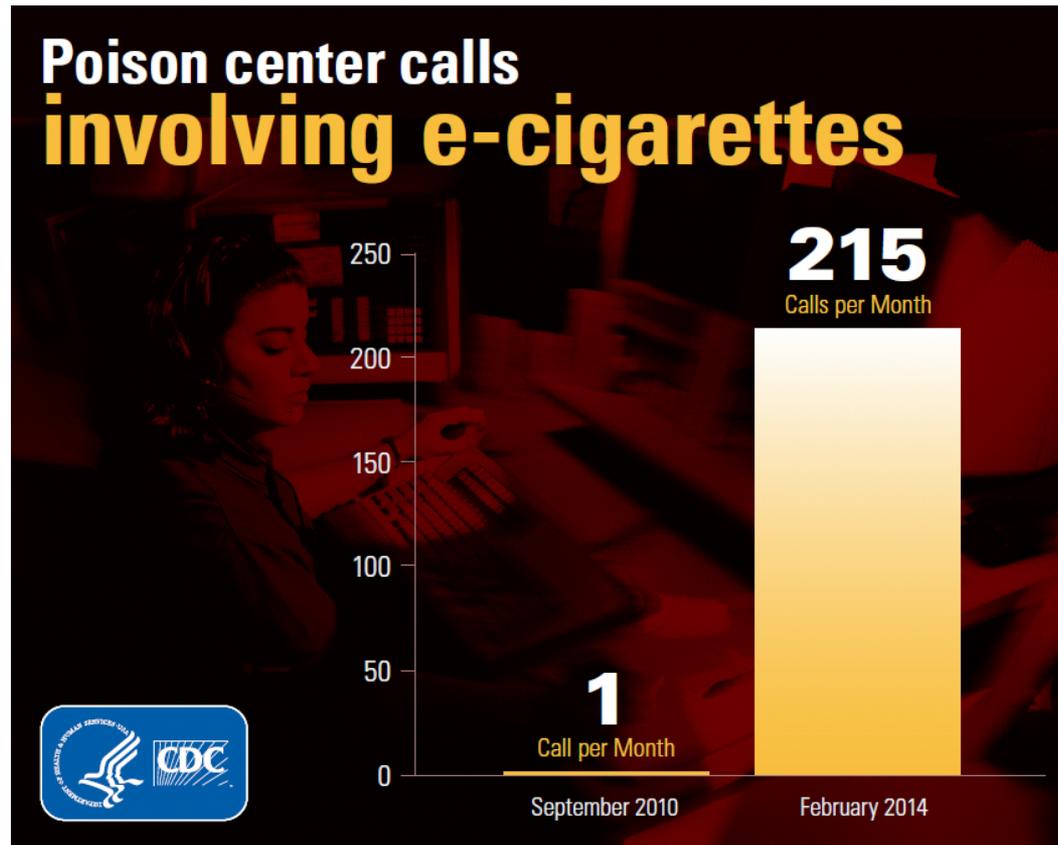
Concerns currently being researched

- Dual use with conventional cigarettes which may result in smokers continuing to smoke rather than quit
- Gate-way for young people - potential to induce nicotine addiction in non-smokers



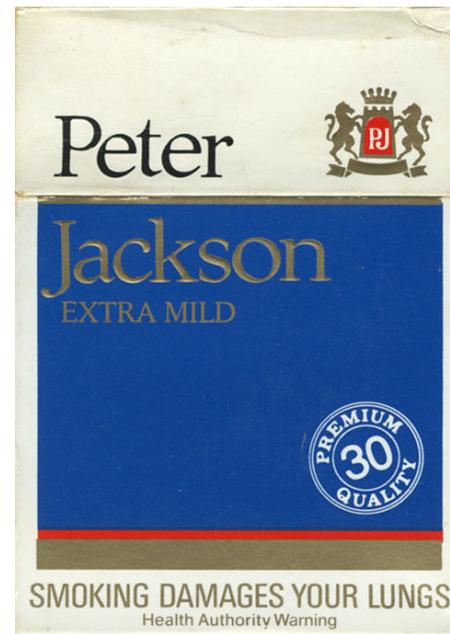
Concerns

- Safety: accidental poisoning of children as bottles are often not in child-proof packaging and are not accompanied by warnings



Concerns

- Reports of tobacco companies purchasing e-cigarette companies
 - Raises concerns about promoting normalization of tobacco use



Tobacco industry involvement



Cigarettes may appear to be different,
but there is no healthier choice.

Cigarette packs use different names, numbers and colours so they all appear to be different. But what you should know is that even though light, mild and low tar cigarettes feel smoother on the throat and easier on the chest, they can deliver the same amount of toxins as full strength cigarettes. The fact is, whatever the pack colour, whatever the number, whatever they are called – all cigarettes are toxic and they all cause serious damage.

**All cigarettes
are toxic**

**Quitline
131 848**


Australian Government

Royal College of Physicians report

released 28th April



Nicotine without smoke Tobacco harm reduction

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

April 2016

Royal College of Physicians report, UK

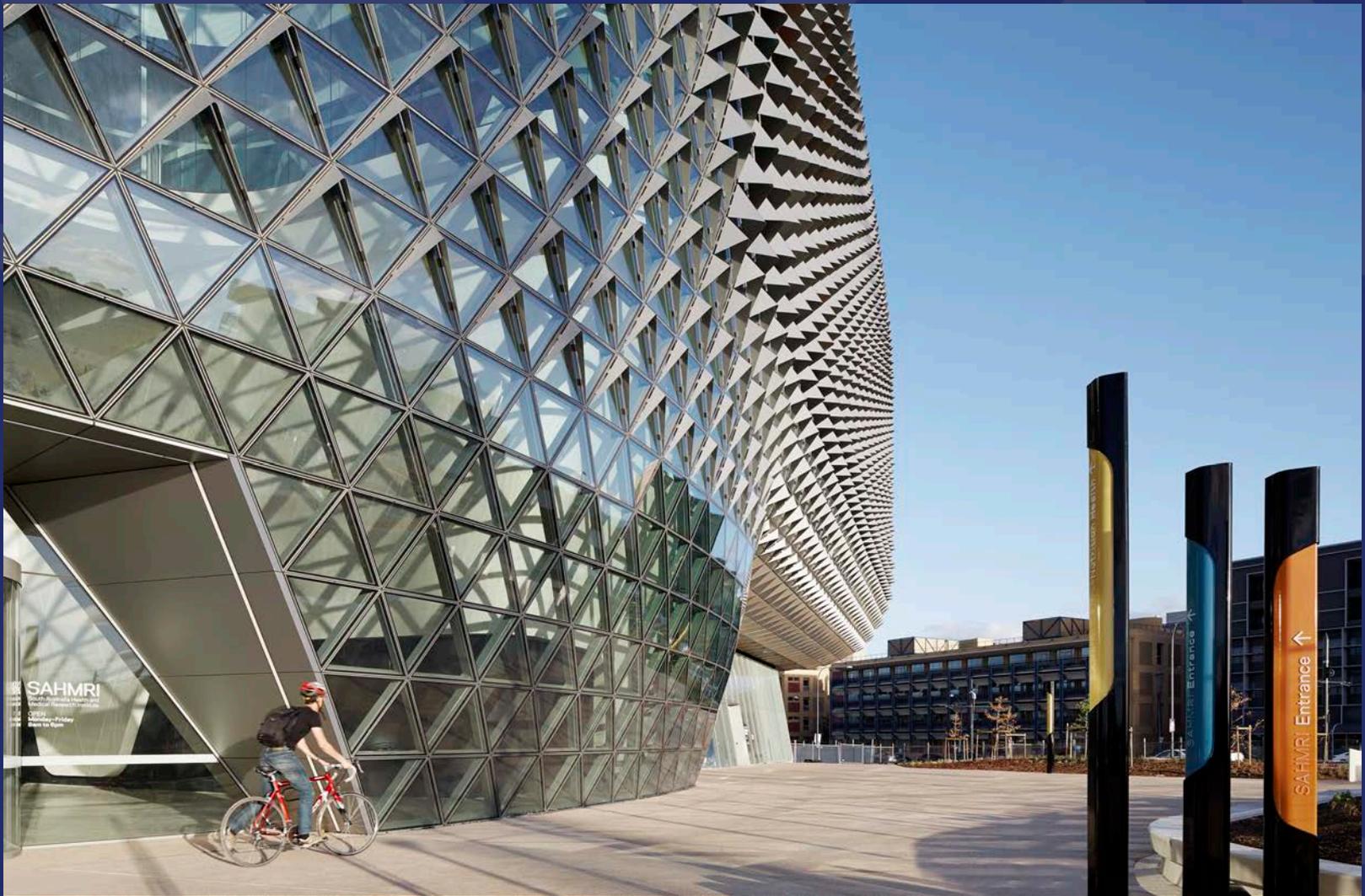
- Pursuit of conventional tobacco control strategies encourages more smokers to quit
- Quitting is difficult as people are addicted to nicotine but are harmed by other constituents
- Not made to medicines standards, probably more hazardous than NRT (unlikely to exceed 5% of the harm caused by tobacco)
- *“..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.”*

What does all this mean for patients in Australia?



How to respond to patients

- Support a smoker's quit attempt, we don't want to undermine motivation
- There are many options to assist people to quit and a range of approved aids such as nicotine patches & gum
- It is illegal to sell e-cigarettes that contain nicotine
- The efficacy as a cessation aid has not been established and the quality may be variable
- More research is needed on the health risks of e-cigs to quit smoking and for long term use
- Dual use of cigarettes and e-cigarettes should be strongly discouraged



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THANK YOU

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