

## Electronic Cigarettes: Fact Check

### Claim/myth: E-cigarettes are the best quitting method available.

**Facts:** Systematic reviews and quality trials have found no conclusive evidence that e-cigarettes are an effective quit aid or that they are more effective than established, approved and safe methods for quitting smoking.<sup>1,2,3</sup> They have, however, concluded that e-cigarette use undermines quit attempts, by promoting tandem use of e-cigarettes and tobacco and maintaining high levels of nicotine addiction in people trying to quit.<sup>1,2,3</sup> Lobbyists may single out individual studies that report a contrary result; this is why critical appraisal of all the evidence, through a systematic framework, is integral to public health policy. On current evidence, e-cigarettes are not an effective quitting aid – let alone “the best”. Claims that e-cigarettes are “the best quitting aid” ignore the systematic review evidence.

### Claim/myth: E-cigarettes are 95% less harmful than smoked cigarettes.

**Facts:** This claim has no basis in science yet is repeated frequently by lobbyists. It is attributed to Public Health England, the (set to be disbanded) entity that adopted it following a panel discussion involving commercial interests and a separate summary briefing from a UK parliamentary group on pharmacy. It involved no systematic review of the evidence, no recognition of the harms of e-cigarettes and relied on the opinions of a small group of individuals with no prespecified expertise in tobacco control. It has been thoroughly debunked in the peer-reviewed literature.<sup>4,5</sup>

Even a basic understanding of epidemiology exposes the flaws, for four key reasons:

- 1) Health impacts from exposure to foreign substances can take decades to appear (asbestos being an example). Estimating with a percentage figure the harms of any external agent on human health without allowing for time lag is unscientific;
- 2) Overseas, millions of young people are using e-cigarettes, who on previous trends were otherwise at no risk of any harms, from smoking or e-cigarettes. Many are now smoking, because of e-cigarettes.<sup>3</sup> A product cannot be deemed “less harmful” – let alone with an arbitrary percentage figure – when systematic reviews<sup>1,2,3</sup> show it delivers harms to the population, with no conclusive evidence of benefit.
- 3) There is uncertainty on what goes into e-cigarette products.<sup>1,2,6</sup> Applying a percentage figure on the perceived harms of unknown substances is unscientific.
- 4) The claim, fallacious as it is, was made seven years ago, prior to a strengthening of the evidence on the harms of e-cigarette use to respiratory and cardiovascular health and the carcinogenic properties of constituents.<sup>7</sup>

The legitimacy given to “95% less harmful” through its constant repetition and use in non-medical media is, as noted in *The Lancet*,<sup>5</sup> an example of the “factoid” age and a reason why rigorous, systematic and independent review of the evidence to inform public health policy is essential. (*The Lancet* editorial described the claim as “extraordinarily flimsy”<sup>5</sup>.)

### Claim/myth: E-cigarettes are mainly used by long-term smokers in Australia to help them quit.

**Facts:** The latest Australian Government data, published in July, shows that e-cigarette use among smokers is highest, by a wide margin, in 14 to 24-year-olds, with just over 69% reporting any use in their lifetime. Current use (as distinct from any lifetime use) among Australian teenagers aged 14 to 17 is 17.5%. This is the second-highest usage rate by age group, second only to 18 to 24-year-olds (18.7%).<sup>8</sup> This is similar to trends in other countries, where usage in school children and young adults is even higher, due to the widespread availability and marketing of e-cigarettes.<sup>1,2,3,9</sup>

More than 64% of Australian teenagers (14 to 17-year-olds) who used e-cigarettes did so before trying tobacco cigarettes. E-cigarette use in Australian teenagers aged 14 to 17 has more than tripled in the three years to 2019. The latest data shows the main reason Australian teenagers use e-cigarettes is curiosity (73.2%) followed by a preference for how e-cigarettes taste (18.3%). E-cigarette usage rates in Australian smokers in their 50s is less than half that of Australian teenage smokers aged 14 to 17. This further refutes the claim that e-cigarettes are for long-term smokers trying to quit.<sup>9</sup> On this evidence, the market for e-cigarettes is young people. As noted in the ANU report, Australia has an outstanding record in recent years in protecting young people from the harms of tobacco and nicotine.<sup>3</sup> The tobacco industry is also on record stating the importance to its profits in addicting new generations to its products.<sup>10</sup>

**Claim/myth: Millions of Australians are reliant on e-cigarettes to quit smoking and will inundate general practitioners with request for prescriptions.**

**Facts:** Claims made by commercial interests about numbers of e-cigarette users in Australia fluctuate so wildly (depending on their lobbying position) that they cannot be addressed with science and evidence. For example, commercial groups in September 2020<sup>11</sup> claimed that “millions” of e-cigarette users would be “forced to doctors’ clinics” for e-cigarette prescriptions. Given the aggregate of Australian daily smokers is estimated at 2.3 million,<sup>3</sup> and only 8% of that group report current e-cigarette use (noting fewer than half of that 8% report using e-cigarettes to try to quit smoking),<sup>8</sup> the claims from commercial interests are nonsensical – yet repeatedly reported in mainstream media.<sup>10,12</sup>

An estimated 227,000 Australians report daily e-cigarette use, a significant increase over the past six years, predominantly in 14-to-17-year-olds and 18-to-24-year-olds.<sup>3,8</sup>

**Claim/myth: Reductions in Australian smoking prevalence have stalled or slowed, so e-cigarettes should be widely promoted to drive down smoking rates.**

**Facts:** New Australian Institute of Health and Welfare data published in July 2020 shows daily smoking rates in 2019 to be at an all-time low of 11%, more than a full percentage point drop on 2016 data and a 10% relative reduction.<sup>8</sup> The same lobbyists who claimed e-cigarettes were the answer to the mythical stalling of prevalence reduction also claimed e-cigarettes were the reason for the actual decline.<sup>12</sup> Yet there is no evidence for either claim.<sup>1,2,3,8,12</sup> The only demographic that reported an increase in smoking rates from 2016 to 2019 was Australian boys aged 14 to 17 (from 2.4 to 3.1%). This group of boys also reported a tripling of e-cigarette use and a percentage increase in line with the reported smoking increase.<sup>8</sup> While it is too early to draw an evidence-based association, these raw data alone refute the claim that e-cigarettes are driving down smoking rates in young people. Based on these data, and on reports from overseas, there is a much greater risk of e-cigarettes driving up smoking rates in young people. At a population level, Australian smoking rates continue to decline, due to the impact of evidence-based tobacco control measures such as antismoking campaigns and price control.<sup>8</sup> The leading factors motivating quit attempts and reported changes in smoking behaviour were the cost of tobacco products followed by health concerns. Use of e-cigarettes as a successful quit method was in insufficient numbers to register in the dataset.<sup>8</sup>

**Claim/myth: The experts in Australia are split on e-cigarette policy.**

**Facts:** To our knowledge, almost every independent evidence-based public health organisation in Australia, and all independent statutory authorities reporting to government, support the current precautionary position<sup>13,14</sup> – consistent with the evidence. The World Health Organisation (WHO) also supports a precautionary approach, particularly in countries with strong success in driving down youth smoking rates – Australia being a world leader in this area of public health. Public health evidence is systematic, not based on unfounded claims, opinions and factoids. Few of the most vocal lobbyists for e-cigarettes in Australia have to our knowledge any grounding in the long, successful history of evidence-based, population-level tobacco control policy in Australia, but they often making the same

unsubstantiated claims in their lobbying. The claims debunked in this fact sheet are definitively not “evidence-based”.

**Claim/myth: Australia’s precautionary approach is out of step with the rest of the world.**

**Facts:** As well as the WHO,<sup>15,16</sup> Australia’s precautionary approach to e-cigarettes is supported by multiple independent global health groups such as the World Medical Association, World Heart Foundation, World Federation of Public Health Associations, Forum of International Respiratory Societies, the International Union Against Tuberculosis and Lung Disease and many others.<sup>13</sup>

**Claim/myth: E-cigarette use in countries where they are widely promoted has led to significant reductions in smoking prevalence.**

**Facts:** These claims are unsupported by evidence from behavioural tracking surveys. For example, data from the long-running Smoking in England Study showed a higher smoking cessation success rate when the use of e-cigarettes during quit attempts declined. At the same time, promotion of e-cigarettes in the UK has led to a 20% usage rate in 16 to 24-year-olds. It also coincided with year-on-year increases in smoking from 16.7% to 21.9% in 18-21-year-olds, (and from 8.7% to 14.4% in 16-17 year-olds, although the sample was small.)<sup>17</sup> This, again, is why systematic review of all the evidence, led by independent scientific research institutes, is fundamental to informing public health policy. It is also critical to look at the evidence in the context of the Australian population and policy environment. (As a comparator, many similar nations waited much longer than Australia to ban asbestos use, for reasons unexplained.<sup>18</sup>)

**Claim/myth: Requiring medical authority to access liquid nicotine for vaporising will be a blow to tobacco retailers.**

**Facts:** It is illegal for any retailer to sell liquid nicotine. Individuals can import it, but only if they have a prescription from a doctor registered in Australia. Retailers that have been selling liquid nicotine in Australia have been doing so unlawfully. As noted, the (illegal) market remains relatively small. The aggressive lobbying from industry has not been to defend an established business, but to create a new one, at the expense of public health.

**Claim/myth: Retailers will go broke if smoking rates continue to decline and will need an alternative product to replace lost profits.**

**Facts:** This myth has been used to counter every evidence-based tobacco control policy since the 1970s. Markets have consistently shown that consumers with disposable income will spend it (particularly those in socioeconomic status quintiles one and two, which represent Australia’s largest smoking demographic). For example, tobacco companies and retailers in the mid-1970s warned of economic catastrophe if tobacco advertising bans were phased in (when 45% of Australian men and 30% of Australian women smoked).<sup>19</sup> Yet Australia’s market economy grew consistently throughout the 1980s and 1990s (apart from two brief periods of volatility unrelated to consumer confidence and consumption).<sup>20</sup> Smoking reduces productivity and imposes a substantial economic burden on Australian businesses.<sup>21</sup> Tobacco and nicotine products have only succeeded as retail items because of addictiveness and marketing. Lobbyists make unfounded claims to suit their purpose – to promote tobacco and other nicotine products, promoting their tandem use and/or their use by young people, who represent the largest growth market and longer-term profits.

## References

---

- <sup>1</sup> National Health and Medical Research Council, CEO Position Statement on electronic cigarettes, 2017; summary updated, June 2020.
- <sup>2</sup> Commonwealth Science, Industry and Research Organisation, Review of E-cigarettes, August 2018.
- <sup>3</sup> Banks, E, Joshy, G, Beckwith, K, Summary report on use of e-cigarettes and relation to tobacco smoking uptake and cessation, relevant to the Australian context Australian National University, September 2020.
- <sup>4</sup> Eissenberg et al, Invalidity of an Oft-Cited Estimate of the Relative Harms of Electronic Cigarettes, American Journal of Public Health, January 2020.
- <sup>5</sup> The Lancet, Editorial. E-cigarettes: Public Health England's evidence-based confusion, August 2015.
- <sup>6</sup> UK Government, Committee on Toxicology, Statement on the potential toxicological risks from electronic nicotine (and non-nicotine) delivery systems (E(N)NDS – e-cigarettes), September 2020.
- <sup>7</sup> McDonald, Jones, Beckert et al, Electronic cigarettes: A position statement from the Thoracic Society of Australia and New Zealand, Official Journal of the Asia Pacific Society of Respiriology, June 2020.
- <sup>8</sup> Australian Institute of Health and Welfare, National Drug Strategy Household Survey, 2019, July 2020.
- <sup>9</sup> Soneji, Barrington-Trimmis, Wills, Association Between Initial Use of e-Cigarettes and Subsequent Cigarette Smoking Among Adolescents and Young Adults – A Systematic Review and Meta-analysis, Journal of the American Medical Association (Paediatrics), August 2017.
- <sup>10</sup> Cummings KM, Morley CP, Horan JK, Steger C and Leavell NR. Marketing to America's youth: evidence from corporate documents. Tobacco Control 2002.
- <sup>11</sup> Reported in News Ltd press and commercial radio, media clippings accessed 24 September 2020.
- <sup>12</sup> Analysis of Australian media, 2018-19, reported in summary at Oceania Tobacco Control Conference, October 2019.
- <sup>13</sup> Greenhalgh, EM, Jenkins, S. & Scollo, MM InDepth 18B.10 Key Australian and international position statements on e-cigarettes, health, and options for regulation, July 2020. In Greenhalgh EM, Scollo, MM and Winstanley, MH [editors]. Tobacco in Australia: Facts and issues. Melbourne: Cancer Council Victoria; 2020
- <sup>14</sup> Commonwealth of Australia. Therapeutic Goods Administration. Interim decision on nicotine scheduling, September 2020.
- <sup>15</sup> Statement on Electronic cigarettes (e-cigarettes) or electronic nicotine delivery systems, World Health Organization, March 2015.
- <sup>16</sup> World Health Organization, summary statement, E-cigarettes are harmful to health, February 2020.
- <sup>17</sup> West, Kale, Brown, Top-line findings on smoking in England from the Smoking Toolkit Study, University College London, Cancer Research UK, September 2020.
- <sup>18</sup> Ogunseitan, O. The asbestos paradox: global gaps in the translational science of disease prevention. World Health Organization, February 2015.
- <sup>19</sup> 1975-76 Cabinet documents. Released under statute in 2006. Australian National Library.
- <sup>20</sup> Department of the Treasury, Australia's century since Federation at a glance, March 2019.
- <sup>21</sup> Whetton, Tait, Scollo et al. Social Costs of Smoking in Australia. National Drug Research Institute, Curtin University, October 2019.