Vaping - An inquiry into reducing rates of e-cigarette use in Queensland

Submission No:	16
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Publication:	Making the submission and your name public
Attachments:	See attachment
Submitter Comments:	

Submission to the Queensland Government's Health and Environment Committee Inquiry

Vaping – Reducing Rates of E-cigarette Use in Queensland

By

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About the submitter:

Dr Michelle Jongenelis is a Principal Research Fellow within the Melbourne School of Psychological Sciences at The University of Melbourne. Dr Jongenelis has expertise in health promotion, intervention development and evaluation, behavioural psychology, and clinical psychology. She works across multiple and diverse health-related behaviours including smoking and e-cigarette use, alcohol consumption, nutrition, and physical activity. Dr Jongenelis sits on the Australian Council of Smoking and Health, and the World Federation of Public Health Associations' Working Group on Tobacco Control. Dr Jongenelis is also an accredited Clinical Psychologist working in private practice.

Declarations:

Dr Jongenelis has not ever received services, assistance, or support (whether monetary or non-monetary in nature) from the tobacco industry and/or e-cigarette industry.

Dr Jongenelis has not ever provided services, assistance, or support (whether monetary or non-monetary in nature) to the tobacco industry and/or e-cigarette industry.

Any opinions expressed are solely those of Dr Jongenelis and do not represent the views or opinions of her employer.

Summary:

Thank you for the opportunity to comment on the Health and Environment Committee's *Inquiry on Reducing Rates of E-cigarette Use in Queensland*. Preventing increases in the use of e-cigarettes, especially among young people, and minimising the harms associated with use should be public health priorities[1]. Although Australia's efforts to date have been largely successful in protecting public health policies from tobacco industry interference, e-cigarettes and other "smoke-free" products constitute a mechanism via which the tobacco industry is renewing its activities under the guise of creating a smoke-free world. Australia has always been, and remains, a world leader in tobacco control. We are continuing to pave the way by implementing effective, evidence-based policies. It is imperative that we adopt an evidence-based approach when it comes to e-cigarettes as these devices have the potential to undermine decades of effective tobacco control efforts that have produced a substantial decrease in the prevalence of smoking.

Responses to the Terms of Reference:

1a. The current status in Queensland relating to the prevalence of e-cigarette use, particularly amongst children and young people.

In Australia, use of e-cigarettes among adult smokers and non-smokers increased from 4% in 2013 to 11% in 2019[2]. Prevalence rates of use among adolescent and young adult non-smokers ***more than tripled*** over the same time period. These figures likely represent an underestimate of the true prevalence of vaping among youth, with a recent national study reporting rates of use that were much higher[3]. In terms of the type of products being used, a recent survey of Australian e-cigarette users found that 78% of 12- to 17-year-olds and 87% of 18- to 24-year-olds were using nicotine e-cigarettes at least monthly[4]. When asked to indicate the strength of the nicotine they used, a quarter reported that they did not know. Most adolescents and young adults were found to be using disposable and pod-based e-cigarettes. Such products are cheaper than other types of e-cigarettes[5,6], and it has been suggested that their inexpensiveness is a potential risk factor for youth uptake[7]. Of further concern, the e-liquids in these types of e-cigarettes are typically

nicotine-salt-based. The lower pH of these e-liquids reduces the harshness of the inhaled aerosol, making the e-liquid highly palatable and easy to inhale[8,9] and resulting in more intense puffing and greater nicotine delivery[10].

These results evidence the presence of recreational e-cigarette use in the Australian community. Given the potential risks associated with nicotine exposure in adolescence and young adulthood (see Section 1b), these results also indicate that most e-cigarette users within these population groups are at considerable risk of harm. In addition, the use of nicotine reported by adolescents supports evidence that these products are being sold in Australia illegally. Indeed, a quarter of adolescent vapers report sourcing their nicotine e-liquid from tobacco or vaping retailers, despite it being illegal to sell these products to minors[4]. This suggests that greater enforcement of laws regarding the sale of liquid nicotine is needed. ***This is currently being hampered by the absence of a positive licensing scheme in Queensland. The introduction of such a scheme is critical to facilitating monitoring of retailer compliance and optimising enforcement of existing laws.***

E-cigarettes are part of Big Tobacco's product diversification strategy to offer new and novel nicotine delivery devices, especially those that have maximum appeal to young people. The rapid and substantial increase in youth use of e-cigarettes reflects trends seen in other countries and is likely attributable to the youth-appealing nature of e-liquid flavours and e-cigarette advertising[11,12]. The vaping industry continues to target adolescents and young adults via the development of new youth-oriented e-juice flavours (e.g., bubblegum, popcorn, Red Bull, fruit loops, Skittles, unicorn milk)[13,14]; the use of appealing e-juice packaging (e.g., cartoons on labels, e-juice boxes that resemble fruit juice cartons)[15-17]; the development of e-cigarettes that resemble USB drives, asthma inhalers, pens, remote controls, and hoodie drawstrings (thus promoting 'stealth vaping')[18,19]; and sponsorship of youth-oriented events[13]. In addition, there is research to suggest that ads for e-cigarettes feature themes (e.g., expression of identity, friendship, sex, attainment of social status) and use techniques (e.g., animation, cartoons, attractive and young protagonists) that have known appeal to youth[20,21].

The vaping and tobacco industries need a new population of individuals to become addicted to nicotine to drive their profits[22]. The emergence of the vaping industry has the potential to undermine years of successful tobacco control in Australia, and action is therefore urgently needed to protect the Australian public from the activities of this industry. Ultimately, the goal of the vaping/tobacco industries is the maximisation of sales and profits. If the vaping and tobacco industries' goal was to genuinely support smokers to quit and exit the market altogether, with no uptake by non-smokers, both industries would cease to exist within the next few decades.

1b. The current status in Queensland relating to the risks of vaping harmful chemicals, including nicotine, to individuals, communities, and the health system.

Statements issued by Australia's Chief Medical Officer[23], the National Health and Medical Research Council[1], and numerous other Australian health organisations express significant concerns about e-cigarettes and endorse the World Health Organization's call for the precautionary principle to be applied when dealing with these devices. ***E-cigarettes are not harmless***; they have been found to contain a number of substances known to be harmful to health, including formaldehyde, tobacco-specific nitrosamines, nicotine, and heavy metals[24-31]. There are also significant health risks associated with their use including reduced lung function, stiffness of the arteries, and increased risk of cardiovascular disease[32-39]. In a recent review documenting the risks associated with e-cigarette use, the addictive nature of nicotine was highlighted[40]. This systematic review of the worldwide evidence on the health effects of e-cigarettes also found that among non-smokers, ***there is strong evidence that use of e-cigarettes has multiple health harms and no health benefits***. Uptake of use in adolescents and young adults is problematic given the impact of nicotine exposure on brain development[41]. However, the health risks associated with use are not limited to nicotine, with evidence indicating that the flavourings and other additives found in e-cigarettes are particularly harmful to health[42]. This is concerning given almost all Australian vapers use flavoured devices[4].

There are several risks associated with e-cigarettes that extend beyond direct health harms. First, there is consistent and compelling evidence indicating that e-cigarette use acts as a gateway to tobacco smoking. ***A recent meta-analysis concluded that non-smokers who use e-cigarettes are approximately three times more likely than those who avoid e-cigarettes to initiate tobacco cigarette smoking[43].*** Second, prevalence of 'dual use' is high[44], with this pattern of tobacco use found to be the most common[45]. Such use does little to reduce the harms associated with tobacco use, with complete abstinence from smoking required to achieve health benefits[46]. Finally, although marketed as an effective smoking cessation aid, research suggests e-cigarette use may drive former smokers back to combustible tobacco cigarettes, with the aforementioned meta-analysis finding that former smokers who use e-cigarettes are more than twice as likely to relapse than former smokers who do not use the devices[43]. It is important not to be persuaded by anecdotal reports of individuals quitting smoking with the aid of e-cigarettes. The net costs and benefits of e-cigarette use must be assessed at the population-level. ***To date, this assessment indicates that e-cigarette use contributes to more population-level harms than benefits[47].***

1c. The current status in Queensland relating to the approaches being taken in Queensland schools and other settings relevant to children and young people to discourage uptake and use of e-cigarettes.

In a recent national study of 218 secondary school principals and teachers[48], 47% of all educators surveyed reported finding a student with an e-cigarette at least monthly (24% at least weekly). Just over one-third (36%) of principals reported suspending or expelling students for e-cigarette possession or use at least monthly (12% at least weekly). Other key findings are as follows:

- 93% agreed that e-cigarette use is increasingly becoming a problem in Australian secondary schools.
- 60% reported that e-cigarette use on school property is becoming a moderate or very serious problem.
- 77% were moderately or very concerned about e-cigarette use by students at the school for which they work.
- 80% reported that addressing e-cigarette use was a priority.

Multiple concerns were raised by educators, including:

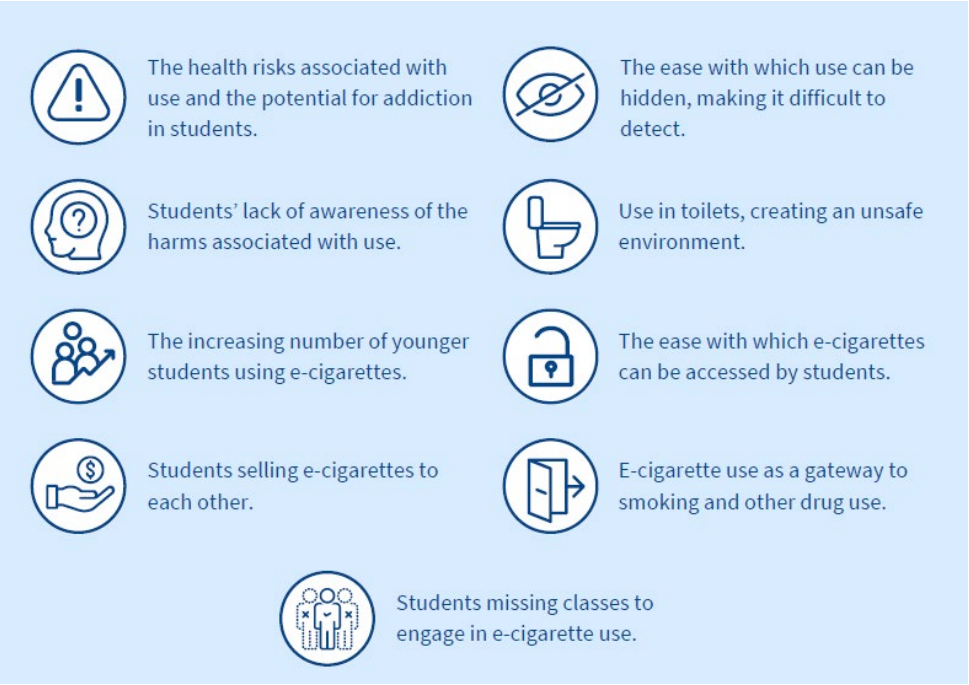

Figure 1: Educators' perceptions of e-cigarettes in Australian secondary schools. Full infographic available at drmichellejongenelis.com.

Despite this, only 51% of those surveyed reported that their school had a vaping policy in place. The teachers and principals surveyed reported desiring education programs for students, staff members, and parents. They also desired the installation of vaping detectors.

It should not be the responsibility of schools to manage the vaping crisis. Government-led policies that reduce the accessibility and availability of e-cigarettes must be introduced to reduce the burden being placed on education settings.

2a. Opportunities to increase awareness of the harmful effects of e-cigarette use (with and without nicotine) to an individual's health, and the effectiveness of preventative activities.

Awareness of the harms associated with nicotine-containing e-cigarettes is reasonably high, with a soon-to-be-published study funded by the National Health and Medical Research Council (available upon request) finding that around 4 in 5 adolescents and young adults believe the products to be harmful to health. Awareness of the harms associated with non-nicotine products is significantly lower, with around two-thirds believing these products to be harmful. The underestimation of the harms associated with non-nicotine and flavoured e-cigarettes is concerning. Those involved in the development of e-cigarette health communications should ensure that these communications do not focus solely on the harms associated with nicotine but also feature information about the risks associated with use of non-nicotine e-cigarettes. It is critical, however, that education campaigns be part of a comprehensive approach to managing e-cigarette use. In Queensland, non-nicotine products are able to be sold by retailers despite the harms they cause. Additionally, as noted in Section 1a, there is no positive licensing scheme in Queensland. ***This is an unacceptable regulatory framework in which Queensland operates.*** If you are to succeed in reducing e-cigarette use in Queensland, these products must be prohibited from retail sale and a positive licensing scheme must be introduced.

2b. Opportunities to increase accessibility and effectiveness of services and programs to prevent uptake and continuing use of e-cigarettes.

No comment.

3. Consideration of waste management and environmental impacts of e-cigarette products.

I commend the inclusion in the Terms of Reference of the environmental consequences of e-cigarettes. These non-biodegradable products contain electronic, chemical, and plastic waste, and present a significant environmental threat when not disposed of correctly. The disposable products are particularly harmful to the environment.

4. A jurisdictional analysis of other e-cigarette use inquiries, legislative frameworks, policies and preventative activities (including their effectiveness in reducing e-cigarette use).

No comment.

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Melbourne School of Psychological Sciences

MELBOURNE CENTRE FOR BEHAVIOUR CHANGE

AUSTRALIAN EDUCATORS' PERCEPTIONS OF E-CIGARETTES IN SECONDARY SCHOOLS

We surveyed over 200 **secondary school principals and teachers** across Australia.

55% Women

19% Principals

81% Co-ed schools

We asked them to report on:

- Their experiences with student e-cigarette use
- Barriers to policy development and implementation
- The presence of e-cigarette policies and educational programs
- Desired support

Here is what we found:

POSSESSION AND USE IN SCHOOLS

47%

of all educators surveyed reported finding a student with an e-cigarette at least monthly (24% at least weekly).

36%

of principals reported **suspending** or **expelling** students for e-cigarette possession or use at least monthly (12% at least weekly).

PERCEPTIONS OF USE

93% agreed that e-cigarette use is increasingly becoming a **problem** in Australian secondary schools.

60% reported that e-cigarette use on school property is becoming a moderate or very **serious problem**.

77% were moderately or very **concerned** about e-cigarette use by students at the school for which they work.

80% reported that addressing e-cigarette use was a **priority**.

82% had the **confidence** to address e-cigarette use but fewer (55%) had the confidence to detect e-cigarette use.

Primary concerns related to e-cigarette use among students included:

The health risks associated with use and the potential for addiction in students.

The ease with which use can be hidden, making it difficult to detect.

Students' lack of awareness of the harms associated with use.

Use in toilets, creating an unsafe environment.

The increasing number of younger students using e-cigarettes.

The ease with which e-cigarettes can be accessed by students.

Students selling e-cigarettes to each other.

E-cigarette use as a gateway to smoking and other drug use.

Students missing classes to engage in e-cigarette use.

SCHOOL POLICIES AND EDUCATION

51%

reported that their school had a vaping policy (cf. 78% tobacco smoking policy).

The most frequently nominated **barriers to enforcement** of policy were:

- E-cigarette products being discreet in appearance.
- Difficulties pinpointing from where the vapour/scent is coming.

77%

reported that their school educated students on vaping (cf. 88% smoking).

Other approaches to the **management of vaping** were:

- Installation of vaping detectors
- Parental education

DESIRED SUPPORT

50% of educators reported desiring education programs for students and staff members.

22% desired the installation of vaping detectors.

CONCLUSIONS

E-cigarettes are presenting a **threat** to Australian secondary school environments and **comprehensive**, **multi-level** efforts are needed to address vaping among secondary school students.

Schools and education authorities must **urgently** develop and implement targeted e-cigarette policies.

Government-led policies that reduce the accessibility and availability of e-cigarettes must be introduced to reduce the burden being placed on schools to manage student vaping.

Prohibiting the sale and importation of all e-cigarettes and related components outside the Therapeutic Goods Administrations' pharmaceutical scheme is critical to reducing the availability and accessibility of these products. This includes non-nicotine e-cigarette products, which are harmful to health and can act as a Trojan Horse for the importation and sale of nicotine products.

Source: Jongenelis, M. I. (2023). Educators' perceptions of e-cigarettes in Australian secondary schools. *Tobacco Induced Diseases*, *21*. doi: 10.18332/tid/161025.

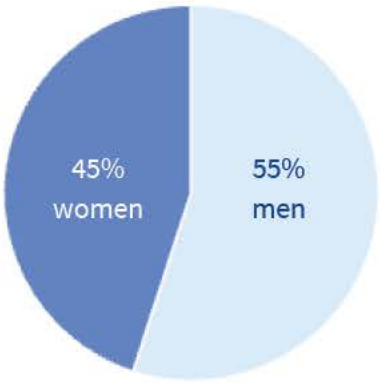
Funding: This work was supported by a National Health and Medical Research Council Investigator Grant (APP1194713).

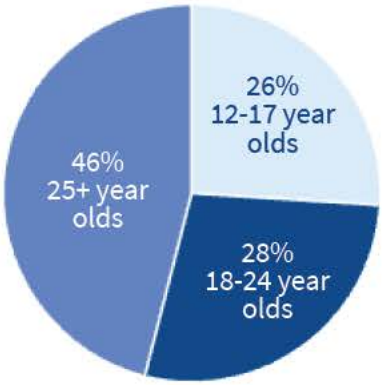
Melbourne School of Psychological Sciences

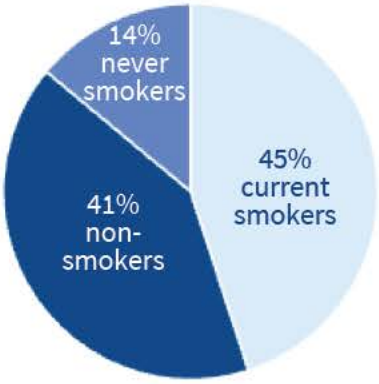
MELBOURNE CENTRE FOR BEHAVIOUR CHANGE

PREFERENCES FOR E-CIGARETTE PRODUCTS IN AUSTRALIA

We surveyed **636 current users of e-cigarettes**:







We asked them to report on their use of e-cigarettes:

with nicotine
(+ strength used)

without nicotine

with flavourings
(+ flavours used)

We also asked them to report:

- The **types of e-cigarette devices** they usually used
- From **where they sourced** their products

This is what we found:

PREFERENCE FOR NICOTINE

A preference for nicotine over non-nicotine e-cigarettes was observed among all age and smoking groups:

Adolescents: 78% cf. 58%
Young adults: 87% cf. 49%
Adults (25+ years): 81% cf. 69%

Current smokers: 87% cf. 65%
Non-smokers: 78% cf. 54%
Never smokers: 78% cf. 61%

A **quarter** of adolescent and young adult nicotine e-cigarette users reported that they **did not know the nicotine strength** of the e-liquid they used.

PREFERENCE FOR FLAVOURING

The vast majority of current e-cigarette users reported using **flavoured e-cigarettes**, with **fruit flavours** found to be most popular:

Adolescents	**96%**	Young adults	**90%**	Adults (25+ years)	**85%**
Current smokers	**87%**	Non-smokers	**90%**	Never smokers	**94%**

DEVICE TYPE

Disposable e-cigarettes were the most commonly used among all groups except adults aged 25+ (who preferred refillable devices):

Adolescents	**68%**	Young adults	**64%**	Adults (25+ years)	**36%**
Current smokers	**43%**	Non-smokers	**59%**	Never smokers	**62%**

PRODUCT SOURCE

Tobacco retailers were the most common source of nicotine e-liquid (28%), followed by **friends** (27%) and then the **Internet** (21%).

CONCLUSIONS

Most e-cigarette users, including adolescents and never smokers, exhibited a preference for nicotine-containing flavoured e-cigarettes.

Flavoured e-cigarettes and disposable devices appear to be facilitating recreational use of e-cigarettes among adolescents and never smokers.

Over a quarter of e-cigarette users, including one in five adolescents, reported sourcing their nicotine e-liquid from a tobacconist, despite it being illegal to sell these products outside the pharmaceutical scheme.

Measures that restrict the accessibility and availability of flavoured e-liquids and disposable e-cigarettes, and greater enforcement of laws regarding the sale of nicotine-containing e-liquids, are urgently needed.

Source: Jongenelis, M. I. (2023). E-cigarette product preferences of Australian adolescent and adult users: a 2022 study. *BMC Public Health*. doi: 10.1186/s12889-023-15142-8

Funding: This work was supported by a National Health and Medical Research Council Investigator Grant (APP1194713).