



# Vaping and smoking behaviours in Australian young adults: A short report

January 30th, 2024

# Generation Vape would like to acknowledge the following partners

Research partners





Federal partner



State partner



Proudly funded by the NSW Government in association with NSW Health and Cancer Institute NSW

Philanthropic partner



# Vaping and smoking behaviours in Australian young adults: a short report

# **Background**

Vaping and smoking are both public health issues in Australia. Of particular concern is the high use in young adults, aged 18-24 years. A recent Australian report indicated that within this age group, 21.4% had vaped within the last six months, which was the highest of any age group <sup>1</sup>. The same report also showed that for this age group, 14.9% had smoked in the last six months, which was the second highest group (behind 25-34 year olds) <sup>1</sup>.

Nicotine use by young people is damaging to their developing brains, having adverse effects on attention, learning, mood and impulse control <sup>2</sup>. A recent global review of the literature found strong evidence to suggest that nicotine-containing vapes can be harmful to health, identifying risks of addiction, poisoning, acute nicotine toxicity, lung injury, and dual use with cigarette smoking <sup>3</sup>. As is well established, tobacco smoking is one of the main causes of preventable death and disease <sup>4</sup> and contributes to the onset of at least 16 different types of cancer, heart disease and stroke, and chronic lung diseases <sup>5</sup>.

Young adulthood is a key life stage where health and risk behaviours are established and become sustained into adulthood <sup>6</sup>. Despite this, public health initiatives broadly do not typically target this age group <sup>7, 8</sup>. Given that young adults report high prevalence of vaping and smoking, a focus on this population is vital for prevention and intervention efforts.

### Aim

To examine vaping and smoking status and behaviours (including quitting) among Australian young adults aged 18-24 years participating in the Generation Vape study.

#### Methods

The Generation Vape research project involves both survey and interview data collection. From February 2022, the research project has included a national young adult sample.

As part of the research project, online cross-sectional surveys are completed at each wave (at approximately 6 monthly intervals) and focus group discussions are completed at every second wave (at approximately 12-month intervals). This report presents the quantitative and qualitative findings from Wave 4 with data collected between February and April 2023.

Ethical approval for the study was given by the Human Research Ethics Committee at The University of Sydney (reference number 2021/442). Informed consent was provided by participants to take part in the research after receiving a Participant Information Statement.

#### **Analysis**

#### **Quantitative data**

Weighted proportions (for gender, state/territory, remoteness and age of the 2016 Australian population) of responses to each question are reported in the findings.

#### **Qualitative data**

Recordings were de-identified and transcribed verbatim. A thematic content analysis was conducted. Quotes have been included for illustrative purposes to provide context and language to the findings of the group discussions.

# **Findings**

# Sample

Overall, 2126 young adult participants completed the survey. Given the nature of the research project, most participants (40%) were from NSW. Table 1 describes the demographic characteristics for quantitative participants.

Table 1. Quantitative participants demographic characteristics (n=2126)<sup>^</sup>

		Total n=2126
Gender	Male	49%
	Female	50%
	Non-binary and other	1%
State/territory of residence	NSW	31%
	VIC	26%
	QLD	20%
	SA	7%
	WA	10%
	TAS	2%
	NT	1%
	ACT	2%
Age (years)	18-19	27%
	20-22	43%
	23-24	30%
Aboriginal or Torres Strait Islander	No	95%
	Yes	4%
	Prefer not to say	1%
Highest education level	Year 10 or below	4%
	Year 11 or 12	37%
	A diploma or certificate from a college/TAFE	20%
	A degree from a university	39%
	Prefer not to say	1%
Employment status	Full-time employee	31%
	Part-time/casual	51%
	Business owner	2%
	Not currently employed	15%
	Other/prefer not to say	2%
Currently studying	No No	38%
ourionaly studying	Yes	62%
Remoteness of residence	Metro	76%
Remoteness of residence	Non-metro	24%
Socio-economic status of residence area	1 - Lowest SES	13%
oodo-economic status of restuence afea		12%
	2	12%
	3	24%
	4 5. Highest SES	
Language anakar at harra	5 - Highest SES	32%
Language spoken at home	English only	83%
	Another language only	3%
Deventer of the second of the	English and another language noteness and age of the 2016 Australian population.	14%

<sup>^</sup> Percentages are weighted for gender, state, remoteness and age of the 2016 Australian population

For the qualitative component, 114 individuals participated in 20 focus group discussions. Table 2 provides the overall sample size by state.

Table 2. Wave 4 qualitative participants by state (n=114)^\*

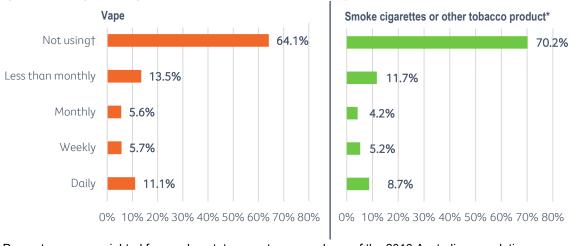
NSW	VIC	QLD	TAS	SA
58 (51%)	17 (15%)	14 (12%)	10 (9%)	17 (15%)

<sup>&</sup>lt;sup>^</sup> Percentages are weighted for gender, state, remoteness and age of the 2016 Australian population.

#### What is the vaping and smoking status of young adults?

Of the total sample, 35.9% indicated that they were current vapers and 64.1% combined were either ex-vapers or never vapers. With regards to smoking, 29.8% indicated they were current smokers and 70.2% combined were either ex-smokers or never smokers. Further information regarding vaping and smoking use is provided in Figure 1.

Figure 1. Vaping/smoking status, when asked "How often do you..." (asked of all participants, n=2126)^

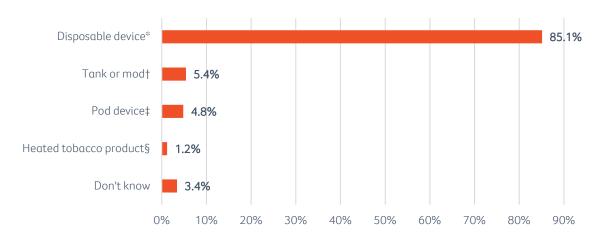


<sup>^</sup> Percentages are weighted for gender, state, remoteness and age of the 2016 Australian population.

#### What are the vaping and smoking behaviours of young adults?

Of the total sample of current vapers, the majority (85.1%) reported most often using a disposable vaping device. Figure 2 provides further information regarding vape devices. Figure 3 highlights the vape intensity or the number of puffs, with 37.4% of participants indicating using devices that contain 3000 or more puffs.

Figure 2. Vape device, when asked "Which one of the following types of vapes do you most often use?" (current vapers only, n=758)^



<sup>^</sup> Percentages are weighted for gender, state, remoteness and age of the 2016 Australian population.

<sup>\*</sup> Qualitative did not include individuals from Northern Territory and Australian Capital Territory due to recruitment difficulties, nor Western Australia due to logistical difficulties with time differences.

<sup>\*</sup> Includes roll-your-own cigarettes, cigars, shisha and pipes.

<sup>†</sup> Not using refers to: never-vapers and ex-vapers combined; and never-smokers and ex-smokers combined.

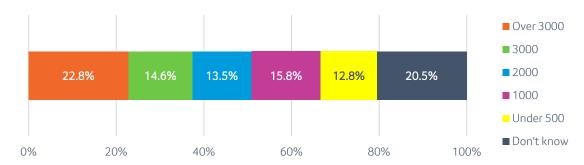
<sup>\*</sup> Not refillable, includes devices that are intended for one time use or those that are re-chargeable.

<sup>†</sup> Require e-liquid or vape juice, are refillable.

<sup>&</sup>lt;sup>‡</sup> Uses disposable pods containing e-liquid, can be re-charged and pods can be replaced.

<sup>§</sup> A battery operated device containing tobacco that is heated.

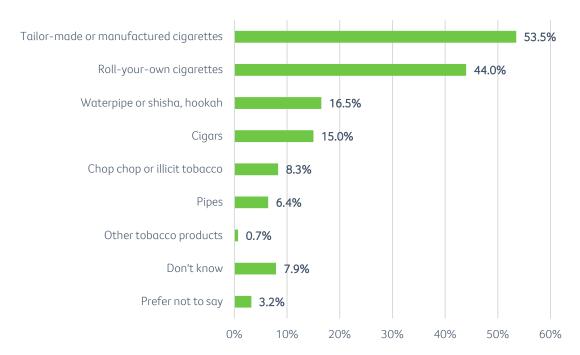
Figure 3. Vape intensity, when asked "Approximately how many 'puffs' does the vape you use most often contain?" (asked of current vapers only, n=758)



<sup>^</sup> Percentages are weighted for gender, state, remoteness and age of the 2016 Australian population.

Of the total sample of current smokers, many reported using manufactured cigarettes (53.5%) followed by roll-your-own cigarettes (44.0%). Figure 4 provides further information regarding smoking preferences.

Figure 4. Smoking preference, when asked "Which, if any, of the following do you currently smoke or use (either regularly or occasionally)\*?" (asked of current smokers only, n=602)^



<sup>^</sup> Percentages are weighted for gender, state, remoteness and age of the 2016 Australian population.

#### How are young adults accessing vapes?

Under current Australian laws, nicotine containing vapes can only be purchased by adults with a valid prescription from a medical practitioner. Of the sample who currently vape, the majority (73.1%) indicated having used a vape they knew contained nicotine, and 3.5% reported obtaining a prescription (Figure 5). Table 3 contains quotes from the focus group discussions which provide insights into participants' experiences with nicotine vapes, highlight the appeal of its effects (such as head spins), but other reasons (reported later in the findings) include being an aid in social situations as well as alleviating stress (Table 4).

Regarding access, 54.0% of current vapers indicated purchasing their last vape themselves (Figure 6). Tobacconists, service station/convenience stores and specialty vape stores (both physical and online) were the most common retailers where vapes are obtained.

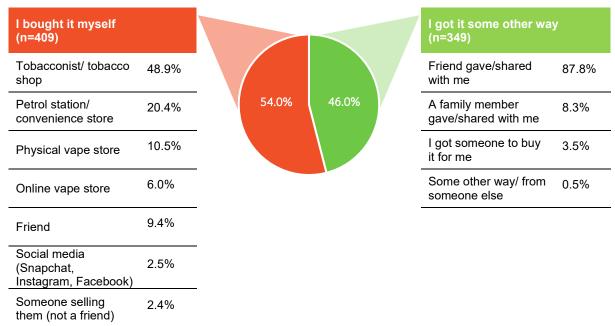
<sup>\*</sup> Multiple responses could be selected.

Figure 5. Use of and obtaining a prescription for nicotine containing vapes (asked of current vapers only, n=758)^



<sup>^</sup> Percentages are weighted for gender, state, remoteness and age of the 2016 Australian population.

Figure 6. Access to vapes, when asked "Thinking back to the last time you vaped, how did you get the vape you used?" (asked of current vapers only, n=758)<sup>^</sup>



Percentages are weighted for gender, state, remoteness and age of the 2016 Australian population.

Table 3. Qualitative quotes regarding experiences with nicotine-containing vapes

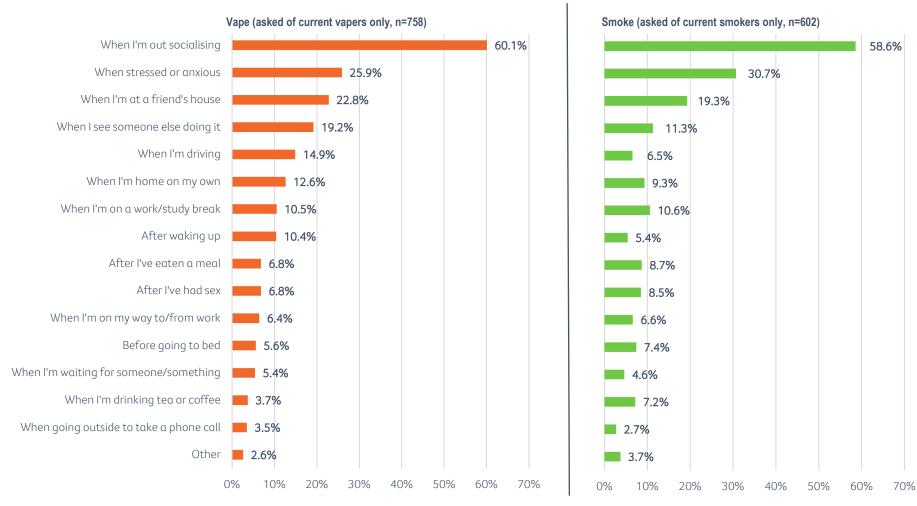
Theme	Quotes
Vaping for nicotine effects	<ul> <li>I took a puff and I coughed, and I was like "what is that?" took another one, actually figured out how to inhale, had my first ever head spin and immediate it was just ah love at first puff. (19, Male, NSW, Metro)</li> </ul>
	<ul> <li>For me, it's really the only reason, cause if, without the nicotine, it's just kind of flavoured air, and I don't really see the point in that. (20, Male, NSW, Regional)</li> </ul>
	<ul> <li>Well you can take long hits on a vape and get way more nicotine than you would when you smoke, so you get way bigger head spins. (18, Male, VIC, Metro)</li> </ul>
	It does make you feel good. It definitely does something to you that you do feel, yeah, whether you feel more drunk or I don't know And I think it's also, it's an alternative to drinking as much or doing drugs 'cos people are like, "Oh, I can vape and get that little dizzy feeling for five seconds," or whatever. (22, Female, SA, Metro)

#### In what situations do young adults vape and smoke?

Participants were asked to indicate the common situations in which they would typically vape and smoke (Figure 7). Of the sample who currently vape, when out socialising was the most frequently selected situation (60.1%). This was followed by when feeling stressed or anxious (25.9%), when at a friend's house (22.8%) and when seeing someone else do it (19.2%). Of the sample who currently smoke, when out socialising was also the most frequently selected situation (58.6%). Similar to vaping, feeling stressed or anxious (30.7%), when at a friend's house (19.3%) and when seeing someone else do it (11.3%) were the next most common situations.

Table 3 provides quotes from the focus group discussions to allow for added context into the situations in which young adults vape. Similarly in the qualitative findings, vaping was seen as a social activity, when with friends or work colleagues during breaks, and illustrates how young adults use it as a social tool (e.g., as an icebreaker or to fit in with groups). Comments regarding the normalisation of vaping intertwine with how people are comfortable with use in public spaces. Likewise, focus group participants discussed how vaping assists with stress relief.

Figure 7. Common situations of use, when asked "In which of the following situations do you most often..." \*\*



<sup>^</sup> Percentages are weighted for gender, state, remoteness and age of the 2016 Australian population.

<sup>\*</sup> Multiple response could be selected.

Table 4. Qualitative quotes regarding common situations

Theme	Quotes
Vaping in social setting and as social tool	<ul> <li>When you go out and then like, it's kind of a social thing, if you're surrounded by everyone who's vaping, you just go out and vape, it's kind of like, you know, you're together. (23, Female, QLD, Regional)</li> </ul>
	<ul> <li>Yeah, but I notice one other thing, that it's pretty like a good ice breaker, like a lot of my mates that wanted to go like talk to a girl, just like went up to them and just be like 'oh like do you want a hit of my stig', and then start a conversation from there. It's like a very easy way to start a conversation. (19, Male, NSW, Metro)</li> </ul>
	- When I go out I've always got a drink in my hand, so I feel like I'm doing something, I don't feel like I'm awkward. And so with vaping it was kind of, it's kind of the same, you know, like someone goes out and they're vaping and you're like, "Oh, I'll vape too," and, or like you have a cigarette or a glass in your hand, it's like something to do to, yeah, calm your nerves. (23, Female, SA, Rural)
	<ul> <li>I find at work now, everyone is vaping, a lot of the smokers have moved to vapes, and so now like when I first started at work, I would never go out for a smoke break. But now, quick vape break with everyone else out there vaping. (21, Female, VIC, Metro)</li> </ul>
Vaping in public spaces	<ul> <li>I have seen people vape in shopping centres. I saw someone in the DFO vape and then blow it in their shirt, and I was surprised by that. I wouldn't do that. (23, Female, NSW, Regional)</li> </ul>
	The main place I've noticed it is public transport, like when people will sit next, 'cos I always take public transport, yeah, people just sitting next to you and the like the wind could be going in your direction and you just get the whole whiff of it become more normalised in different scenarios compared with smoking, especially. (23, Female, VIC, Metro)
Vaping is convenient	<ul> <li>It's just so convenient to be able to do it at work or, like you work in a warehouse or something, or you can even do it at home, you don't have to, especially if you're rolling or something like that. There's just the convenience for it. (19, Male, SA, Metro)</li> </ul>
	<ul> <li>Oh yeah, it's pretty convenient, like although it's bad and whatever or not, it's pretty convenient, like especially being in the trade industry and you don't really have time to just stop and roll a durrie or whatever You just pull your vape or and away you go. (18, Male, QLD, Regional)</li> </ul>
Vaping to help with stress	<ul> <li>I guess there has been times where I'm like maybe having a panic attack or something like that, and just the um that nicotine release like running through my body makes me feel calm again, I guess the absence of the craving makes me feel calm, I suppose. It's like, I don't know boomers have their tea, and like I have my vape. (23, Female, NSW, Regional)</li> </ul>
	<ul> <li>It's just a relief, hey, you just calm down and you can feel your heart just slowing down from racing to slowing down, it's just good, you just calm down and just mellow, like more mellow. (18, Male, QLD, Regional)</li> </ul>
	It's, for me at least, if I'm jumping into a bathroom at work or something, it's easier for me, because like I said, I use- I used to smoke socially and um, if it was a very high stress situation, and if I'm on an 8 hour shift, and it's the end of the day, where it's busy and I can't get outside for a smoke break, and I'm stressed, knowing that I can step into a bathroom and like – which I don't do very often, but it does happen sometimes. (22, Female, NSW, Regional)
Progression of use, something to do then becomes habitual	<ul> <li>I think that's how it starts off for everyone, like you see someone do it, and that's where it starts. But I think after a point if you're actually, you continue doing it, it becomes a thing where you're doing it even when no one's watching it's not about people anymore. (22, Female, NSW, Metro)</li> </ul>
	<ul> <li>Some of my friends they will be just laying down on the bed and vaping, and I was like, NO, you shouldn't be vaping in the house. And especially when you are relaxing, and I don't know. (21-24, Female, SA, Metro)</li> </ul>
	<ul> <li>I live alone, I work from home, I don't get the luxury of social contact, so for me like it is just, it's something to do. (23, Female, NSW, Regional)</li> </ul>
	<ul> <li>Just whenever you're kinda bored and you're twiddling your thumbs 'oh well, l'll just have a vape, cause I just can'. (19, Male, TAS, Metro)</li> </ul>
	- Even if I'm just like, watching a show or something if I've got no food, then I'm

#### What are young adults' experiences with quitting and addiction?

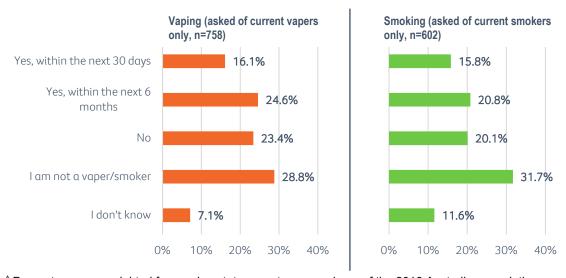
Of participants who currently vape, 32.8% indicated they have tried to quit in the past (Figure 8). Regarding future quitting intent, 40.7% and 36.6% of current vapers and current smokers reported planning to quit in the next 30 days to 6 months respectively (Figure 9). The response option "I am not a vaper/smoker" relates to participants not identifying themselves as a person who vapes or smokes, despite indicating vaping/smoking either daily, weekly, monthly, or less than monthly as reported earlier (Figure 1).

Figure 8. Vape quit attempts, when asked "Have you ever tried to quit vaping before?" (asked of current vapers, n=758)^



<sup>^</sup> Percentages are weighted for gender, state, remoteness and age of the 2016 Australian population.

Figure 9. Intention to quit, when asked "Right now, are you seriously thinking about quitting..."



<sup>^</sup> Percentages are weighted for gender, state, remoteness and age of the 2016 Australian population.

Table 5 provides quotes from the focus group discussions which illustrate participants' experiences of quitting and addiction. The qualitative findings showed the nuances in how addiction can occur unexpectedly for some, particularly as vaping initially starts socially with friends but becomes habitual and ingrained in daily activities. Perception of addiction was mixed in discussions. Some commented having no intent to stop vaping as they are not addicted – they do it infrequently and believe they could easily quit when ready to. Likewise, some talked about vaping being part of their current life stage and had loose intentions to quit when older and settled. However, others recognised vaping was problematic for them and wanted to quit but described the difficulties of experiencing nicotine withdrawals. Other challenges to quitting included costs for nicotine replacement therapies, not knowing how to, and the social barriers, such as not being able to refuse when offered or feeling left out. A number of participants talked about using vapes in an attempt to reduce their smoking but becoming dual users (vaping and smoking) in the process.

Table 5. Qualitative quotes regarding quitting and addiction

Theme	Quotes	
Vaping is not a concern, feel in control	-	I think, that's why from personal experience, even when someone tells me it's addictive, I disagree, because I think it was ok, I'm fine. (22, Female, NSW, Metro)
	-	I've seen as well, like two or three posts on Facebook and TikTok of people who have been hospitalised like, so I guess that makes me worry for any of my friends that do it a lot, but not for myself. (23, Female, VIC, Metro)
	-	I just embrace it and have faith that like other things I've given up, I'll have the guts to do it when I'm older, and it's like, especially with your mates, like I feel like you hit an age of you know 21 to 25, and that's when you really start slowing things down, but at this age it's sort of like, enjoy it while you have it, get rid of it later, and if there's anything I know, I'm sure I can give it up. (20, Male, NSW, Regional)
Want to quit, but withdrawals are hard	-	I couldn't really think that much about what I like about vaping, it's just the absence of nicotine withdrawal that I like staying away from. That's why I continue to vape, because I don't like going through going through that itch phase, it's not comfortable. (23, Female, NSW, Regional)
	-	I think the biggest thing for me was like when I was addicted, it was kind of like I didn't think about it at all, um like you don't think about it it's just kind of like an action. It's kind of like blinking at that point, like you don't think about it, you just do it, like when you're lying there on your phone, you don't actually notice it until like the stig's empty or something like that. Um, and then when you're on withdrawals, it's the only thing you can think about. (20, Female, NSW, Metro)
Barriers to quitting	-	It's actually cheaper I think to vape than to buy like we discussed like nicotine gum and patches and stuff, I think it's cheaper to vape than to buy the stuff that will help me quit, so it' it's kinda like a catch 22, like I feel like I want to, but at the same time it's like less of a trek to just kind of continue. (24, Male, NSW, Metro)
	-	Like, you know, when you hear those kinds of stories [health impacts] it makes me think, "Oh, yeah." It puts me off wanting to buy ciggies and vapes, but when they're there on offer and they're right in front of me, you know, it's hard to turn them down. (18, Male, TAS, Metro)
	-	It is a very social thing, like I do kind of miss it sometimes, cause you meet so many people like if you have one, or like just asking people for a hit, you make so many friends I was so addicted for so long, and it took me so long to get off it. So now I'm scared that, and like I would quit for like a few months and then I would have like one hit at a party from a mate or something that was just like 'here, have a hit', and then it would just start again, and I just couldn't get off it for a few months again. (20, Female, NSW, Metro)
Using vapes to quit smoking, becoming dual users	-	Um, personally I was going to say I'd like to stop smoking, but when you added the part "would you rather vape than smoke?" that's when I shook my head. I, the cigarettes give me more of a hit, I guess, than vaping. I don't know, vaping doesn't really do it much for me, that's why I still continue the amount of cigarettes I have a day. (20, Male, VIC, Metro)
	-	Ah, I've been smoking for quite some time and I, I'd be around my father and he'd be trying to quit smoking too and he'd always be like, "Oh, vaping helps, you know, and it's so easy to get off vaping 'cos it's just fake smoke," and I'm like, I didn't understand what he was saying and I was like, "Well, whatever." So I started vaping and then, I don't know, I kind of got hooked to it but I got hooked more onto the cigarettes than the vaping. So I just kind of manage between both so if I was like in the garage or something like that, I'd vape, if I was outside I'd smoke. I got stuck in both. (20, Male, VIC, Metro)

## Key messages and implications

There is an urgent need for full implementation and enforcement of the prosed vaping reforms given the window of opportunity to act to limit vaping among 18-24 year olds. (See Box 1).

#### **Key takeaways:**

- Access to vapes remains easy with a rise in use of higher puff devices
- Increased number of young adults experiencing health impacts of vaping including addiction or dependence
- Increasing number of quit attempts, both prior and planned
- Vaping has become embedded in social norms and seen as common among young adults
- Perception that there is a distraction between problematic vaping (addiction and requires quitting) and recreational vaping (seen as acceptable and normal)
- Smoking remains a concern among young adults with tailor-made cigarettes most common, followed by roll-your-own and Shisha
- Based on previous Generation Vape survey waves, there was a rise in the use of vaping devices with over 3000 puffs.
- Promisingly there was an increase in vapers considering quitting in the next 30 days, and more had made a prior attempt to quit compared to previous survey waves.
- When compared to previous data waves, the use of disposable vaping devices increased.
- From the focus groups, discussions about quitting vaping and addiction were highly linked. Quitting vaping
  was only deemed necessary or something of any real concern for "highly addicted" users. Some social
  vapers acknowledged they used vapes quite frequently but felt that they had not crossed the line to
  problematic use. Provided vaping remained fun, socially connected, and users were primarily sharing vapes
  with others, vaping was framed as acceptable and normal.
- A set of unspoken social rules about where and when it is acceptable to vape are emerging, private space such as homes and cars are given far more respect/caution when considering whether it is acceptable to vape indoors or not – particularly if young people live with their parents. Licensed premises appear to be highly acceptable placed to vape indoors with a mix of conditions that make it acceptable or not. (This is despite the fact that, in some states, NSW for example, vaping is banned in all places where smoking is banned).
- While there is high knowledge/agreement that vaping/nicotine is addictive, there is very poor understanding of how addiction occurs, or what the signs of addiction entail. Addiction is generally seen as largely avoidable, or only applicable to certain types of people, if users are mindful of how and where they vape. Addiction was never raised as a product feature, but was framed as the result of individual characteristics and behaviours. Addicted vapers also overestimate the ease with which they will be able to give up vaping. Of those vapers who self-identified as heavily addicted and had tried to quit, few had accessed support and relapse was commonly reported. Some vapers reported reducing their vaping to "non-addictive" levels after experiencing health impacts.

#### Box 1. New vaping reforms

Recently the Federal Minister for Health, Mark Butler, announced a suite of stringent measures to tackle the issues of vaping and smoking <sup>9</sup>:

- The first stage of Australia's new vaping laws will commence on 1st January 2024, including:
  - o banning all single use, disposable vapes
  - introducing a Special Access Scheme pathway to allow medical and nurse practitioners to prescribe therapeutic vapes where appropriate
- From 1<sup>st</sup> March 2024 further laws are expected, including:
  - stopping the import of all non-prescription vapes
  - restricting flavours, colours, and other ingredients of prescription vapes
  - o requiring pharmaceutical-like packaging
  - o reducing the allowed nicotine concentrations and volumes
  - o compliance to vape product standards
  - o requiring licences and permits for legal importation of vapes
- Public health campaigns to discourage vaping and smoking uptake and encourage quitting
- Support programs for cessation, including education and training in health professionals

#### Citation

Rose S, Chapman L, Egger S, Jenkinson E, Madigan C, McGill B, Yazidjoglou A, Brooks A, Dessaix A, Watts C, Freeman B. Vaping and smoking behaviours in Australian young adults: a short report. Cancer Prevention and Advocacy Division, Cancer Council New South Wales. October 2023.

# Acknowledgements

This research was conducted by the Generation Vape research team from the University of Sydney, Daffodil Centre and Cancer Council NSW and was funded by the Federal Government Department of Health, the NSW Ministry of Health, Cancer Institute of NSW and Minderoo Foundation.

The authors of this report would like to acknowledge and thank all contributors to this project including the Generation Vape Research Project Advisory Committee (RPAC), qualitative research partner MMResearch, and quantitative research partner ORIMA Research.

#### Contact us

Cancer Council NSW, Cancer Prevention and Advocacy Division, Tobacco Control Unit

Email: generationvape@nswcc.org.au

Website: https://www.cancercouncil.com.au/cancer-prevention/smoking/generation-vape/

#### References

- 1. Wakefield M, Haynes A, Tabbakh T, *et al.* Current vaping and current smoking in the Australian population aged 14+ years: February 2018-March 2023. Centre for Behavioural Research in Cancer Council Victoria: Melbourne. 2023. (accessed 15 Jan 2024)
- 2. US Department of Health Human Services. E-cigarette use among youth and young adults: a report of the Surgeon General. US Department of Health and Human Services, CEnters for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health: Atlanta, GA. 2016. (accessed 15 Jan 2024)
- 3. Banks E, Yazidjoglou A, Brown S, *et al.* Electronic cigarettes and health outcomes: umbrella and systematic review of the global evidence. *Medical Journal of Australia* 2023;**218**(6):267-275.
- 4. Australian Institute of Health and Welfare. Australian Burden of Disease Study: impact and causes of illness and death in Australia 2018. AIHW, Australian Government: Canberra. 2021. <a href="https://www.aihw.gov.au/reports/burden-of-disease/abds-impact-and-causes-of-illness-and-death-in-aus/summary">https://www.aihw.gov.au/reports/burden-of-disease/abds-impact-and-causes-of-illness-and-death-in-aus/summary</a> (accessed 15 Jan 2024)
- 5. US Department of Health Human Services. The health consequences of smoking: a report of the Surgeon General. US Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health: Atlanta, GA. 2004. (accessed 15 Jan 2024)
- 6. Bonnie R, Stroud C, Breiner H, *et al.* Investing in the health and well-being of young adults. The National Academic Press: Washington, DC. 2014. (accessed 15 Jan 2024)
- 7. Freeman B, Kelly B, Vandevijvere S, *et al.* Young adults: beloved by food and drink marketers and forgotten by public health? *Health Promotion International* 2016;**31**(4):954-961.
- 8. Villanti AC, Niaura RS, Abrams DB, *et al.* Preventing smoking progression in young adults: the concept of prevescalation. *Prevention Science* 2019;**20**:377-384.
- 9. Commonweatlh of Australia The Department of Health and Aged Care. Taking action on smoking and vaping. 2023. <a href="https://www.health.gov.au/ministers/the-hon-mark-butler-mp/media/taking-action-on-smoking-and-vaping#:~:text=Quotes%20attributable%20to%20Minister%20Butler%3A&text=%E2%80%9CVaping%20is%20creating%20a%20whole,by%20and%20let%20this%20happen.%E2%80%9D (accessed 15 Jan 2024)