Guidance for Health Workers supporting people to stop vaping and using vaping to stop smoking

November 2024

Health New Zealand
Te Whatu Ora

Contents

Suggested citation

Fu J, Syeda A, Bullen C. 2024. ***Guidance for Health Workers In Aotearoa New Zealand on supporting people to stop vaping and using vaping to stop smoking.*** Wellington: Health NZ.

About the Guidance

In early 2024, Health New Zealand contracted Waipapa Taumata Rau/University of Auckland to develop a guidance document on vaping cessation for health workers and others who work with people who smoke and/or vape and want to stop (hereafter referred to as the 'Guidance').

The document is primarily intended to provide guidance for health workers in supporting clients or patients who vape and want to stop to do so. Some people who started vaping did so to stop or cut down smoking. Others did not smoke before beginning to vape. In both groups, it is essential to minimise the risk of taking up smoking after stopping vaping. Therefore, the document also provides current evidence on vaping to stop smoking.

As a guidance document, this resource aims to outline good vaping cessation practices, given what is currently known about vaping cessation and vaping to stop smoking. This document does not constitute a set of mandatory guidelines or best practices.

The Guidance also summarises evidence on the health effects of vaping, and vaping in specific population groups, such as pregnant people and young people. A more in-depth review of the evidence of the health effects of vaping, as well as stop-vaping interventions, is contained in a companion background document.

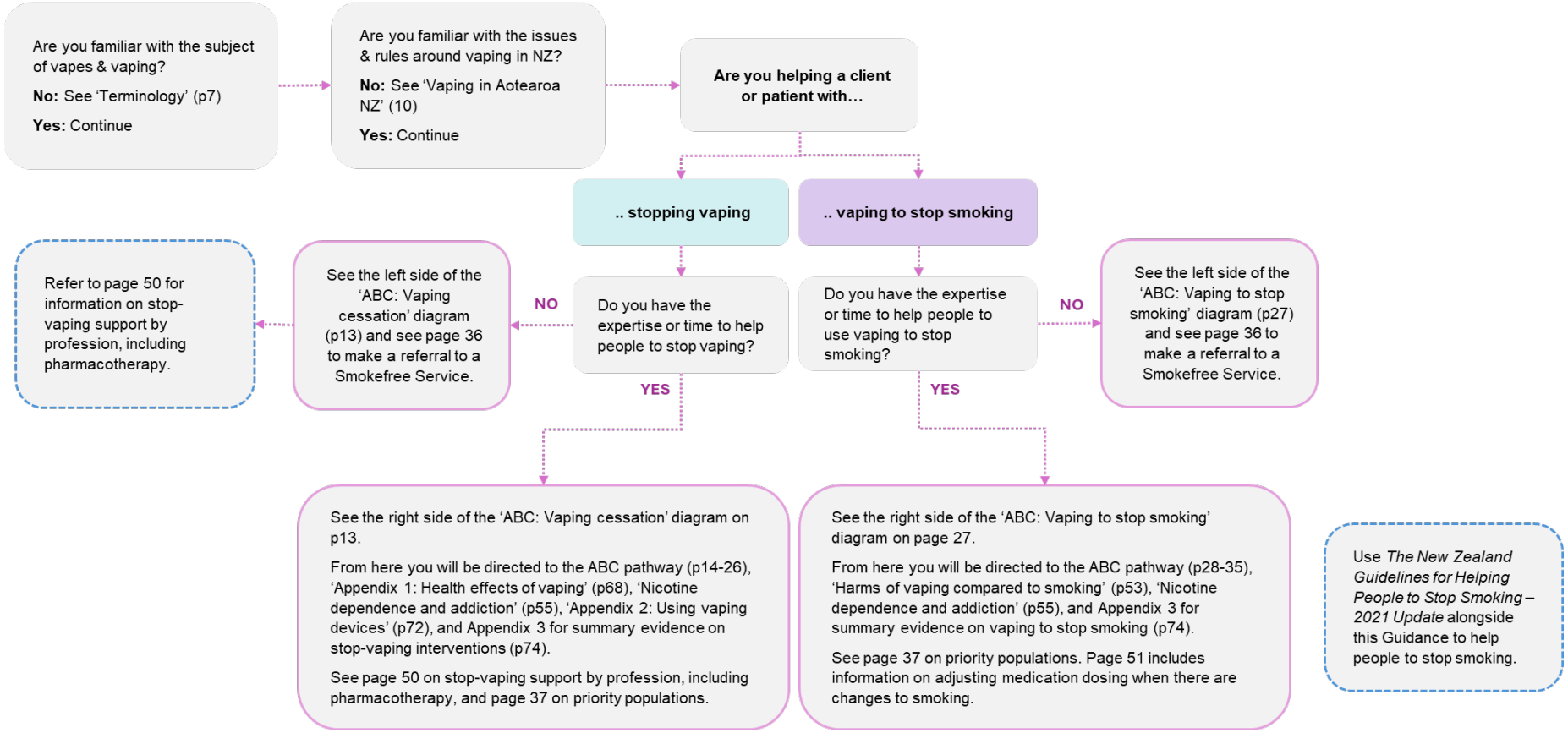
The Guidance seeks to be theory- and evidence-based and aligns with current policies and regulations about vaping and vaping cessation in Aotearoa New Zealand. It aligns with the 'ABC pathway for helping people to stop smoking' from *The New Zealand Guidelines for Helping People to Stop Smoking – 2021 Update*. The Guidance should be used alongside these Guidelines to help people stop smoking. It is the first document to synthesise evidence on vaping cessation and vaping to stop smoking by drawing on local and international resources to create a New Zealand-specific resource.

Longstanding health inequities between Māori and non-Māori reflect in part differences in smoking prevalence (Ball et al 2023). A disparity between Māori and non-Māori vaping prevalence is now emerging. It is important to name colonisation and environmental risk factors, such as racism, socioeconomic deprivation, and targeting by the tobacco industry, as factors that have created and maintained such disadvantage in Māori (Reid and Robson 2007). We have sought to uphold Te Tiriti throughout the Guidance development process. By Māori, for Māori approaches will be essential to ensure support for vaping cessation is designed and delivered in a culturally safe and effective manner.

The Guidance was developed with advice from an Expert Working Group established in March 2024. The Working Group was co-led by Māori and Pacific experts in vaping, vaping cessation, and smoking cessation, including Smokefree Service providers. Significant stakeholder and end-user involvement in the consultation process included focus group work with Māori, Pacific, and Other Smokefree Service providers in the North and South Islands and with Māori, Pacific, and Other people who vaped and sought support to stop vaping. Experts in vaping cessation and smoking cessation from Australia, Canada, and the United Kingdom also reviewed this Guidance. The review focused on the evidence on vaping cessation, vaping to stop smoking, and the health effects of vaping.

The evidence for what works to support successful vaping cessation is limited but evolving rapidly. Similarly, the evidence on the health effects of vaping is still emerging. In addition to assessing the quality of research evidence, we prioritised recency and relevancy when including peer-reviewed articles to inform the Guidance. Some evidence may be superseded by the time of publication, and further review of the Guidance will need to occur as new evidence emerges. However, the underlying framework and principles of the Guidance are robust, building on well-established practices used in Smokefree Services.

How to use the Guidance



Acknowledgements

A small group at the School of Population Health, University of Auckland, led the writing of the Guidance. An Expert Working Group and an International Expert Peer Review Group provided valuable feedback on the Guidance as it evolved. Focus groups of providers and clients helped ensure that the Guidance was grounded in real-world practice and issues.

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Provider and end-user focus groups

Dr Fa'asisila Savila (School of Population Health, The University of Auckland) facilitated focus group consultations. Basil Fernandes, Carlijn van Os, and Sarah McKenzie provided exceptional support in arranging the provider focus group sessions. We also acknowledge clients from the Counties Manukau Living Smokefree Service who gave their time and experience to participate in focus groups arranged and facilitated by Rachel Adams, Xavier Faitala, and Olivia Miller.

Document design and formatting

Elaine Umali, Digital Solutions Programme Manager (National Institute for Health Innovation, The University of Auckland), made significant enhancements to the design and formatting of the Guidance.

Terminology

The terms used to describe vaping and vaping products have changed over time as products and use have evolved. This section clarifies some of the terminology used to describe these products.

Vapes, vaping, and e-cigarettes

The Guidance and the Background Document use the terms “vapes” and “vaping” to refer to electronic cigarettes and their use, respectively. Colloquial terms for the act of vaping include ripping, puffing, and hitting (Jonas 2022). Electronic cigarettes are also known as e-cigarettes, e-cigs, electronic nicotine delivery systems (ENDS), vapourisers, electronic vapour products, and electronic vapour delivery systems.

Vapes are battery-powered devices that heat e-liquids into an inhalable aerosol via a metal coil (Gordon et al 2022; Jonas 2022) to a temperature between 100°C and 300°C and sometimes to over 350 °C, depending on the type of vape, e-liquid, and power output (Szumilas et al 2022). The e-liquid does not contain tobacco. Vaping e-liquid involves a process of heating and not burning. Smoking cigarettes, however, involves the combustion or burning of tobacco, which creates cancer-causing substances.

Image One: Fourth-generation pod mods containing a prefilled or refillable pod cartridge (“pod”) of e-liquid with a modifiable (“mod”) system (Centers for Disease Control and Prevention (U.S.) 2019).

E-liquid

The liquid in vapes is known as E-liquids, “vape juice” or simply “juice”. E-liquids typically consist of propylene glycol and vegetable glycerine, which act as carriers for flavouring agents and nicotine and generate the smoke appearance of aerosols (Gordon et al 2022; Jonas 2022). The flavouring in e- liquids consists of a mixture of aldehydes, such as benzaldehyde, in fruit flavours (A. Ahmed 2022).

E-liquids commonly contain nicotine, although some e-liquids are nicotine-free (Asfar et al 2022). “Nicotine vaping” refers to vaping e-liquid that contains nicotine. Researchers have reported nicotine content in the range of 0.3–5 percent (3–50 mg/mL) in e-liquids available for commercial retail (A. Ahmed 2022). However, discrepancies may exist between the labelled nicotine content on the packaging and the actual content determined by chemical analysis in the laboratory (A. Ahmed 2022).

E-liquids usually contain nicotine in freebase (‘natural’) or salt form. The freebase nicotine is bound to acids such as benzoate in salt form. Nicotine salts are increasingly used because they reduce throat irritation by lowering the pH of the e-liquid and may increase nicotine absorption compared to freebase nicotine (Harvanko et al 2020).

Each pod vape containing 40 mg of nicotine in salt form delivers the equivalent of smoking approximately a pack of 20 cigarettes, although this varies based on the person’s vaping use and experience and the flavour of the vape (Prochaska et al 2022).

Image Two: Third-generation rechargeable and modifiable tanks or “mods” that allow for customisation of substances in the device (Centers for Disease Control and Prevention (U.S.) 2019).

Vaping product types

Rapid vaping industry growth has led to a diverse range of vaping products. Older vape models included first-generation low-power cigalikes. Vape pens, pods or vape pods, pod mods, and vape mods refer to the newer models of vapes and vape components on the New Zealand market. Tank systems are used with vape mods and allow a wider range of e-liquids and advanced modifications for customisation (Gordon et al 2022). In pod systems, the range of e-liquids is more limited (Jonas 2022).

Different vape types and components for retail include:

- disposable vapes
- prefilled or refillable reuseable vapes

- a wide selection of e-liquids in different nicotine strengths and flavours
- accessories such as chargers and replacement parts.

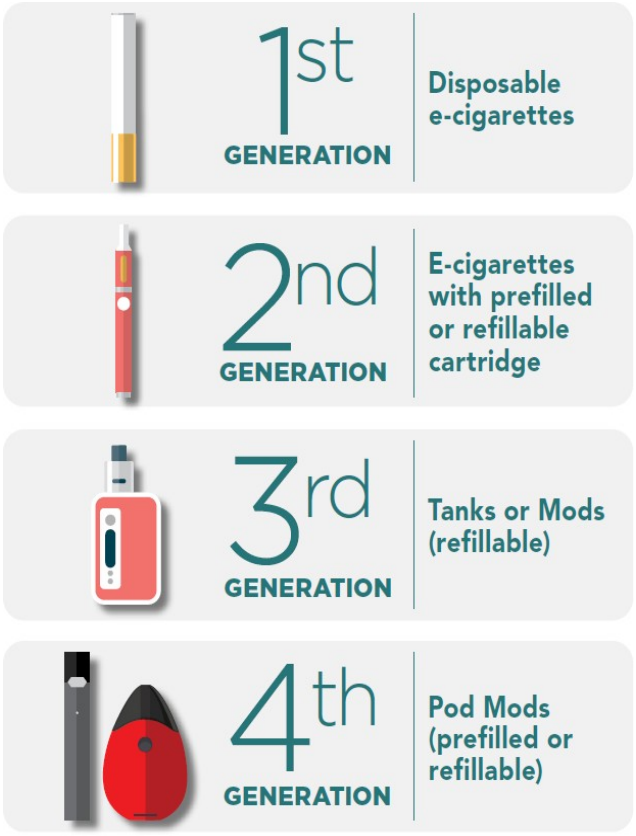


Image Three: A schematic of the different generations of vaping products: first-generation cig-a- likes, second-generation battery pens, third-generation modifiables ("tanks" or "mods"), and fourth- generation pod mods (Centers for Disease Control and Prevention (U.S.) 2019).

Vaping in Aotearoa New Zealand

This section summarises key issues relevant to vaping in Aotearoa New Zealand: regulation, equity, and use by young people.

Regulation of vaping in New Zealand

Vaping has grown in popularity since the early 2000s when vapes were first brought to market, including in the US, China, and Europe (Jonas 2022; Rough et al 2024). Vaping became widespread worldwide from the mid-2010s (Rough et al 2024). In New Zealand, vapes are regulated products with a role in smoking cessation and in reaching the Smokefree goal as a less harmful form of nicotine delivery compared to combusted tobacco. They are not approved nor licensed smoking cessation medicines or devices (Ministry of Health 2021a).

There is evidence supporting the effectiveness of nicotine vaping products in increasing long-term tobacco smoking quit rates, compared with nicotine replacement therapy (NRT) and with vaping products that do not contain nicotine (Lindson et al 2024). The evidence for nicotine vaping as an aid to smoking reduction (reducing the number of cigarettes smoked per day) and its association with increased smoking cessation rates extends to those who do not intend to stop smoking (Cobb et al 2021; Kasza et al 2023).

In 2018, nicotine vapes were legalised for sale in New Zealand in an unregulated market and were regulated from 2020 as a consumer product under an amendment to the Smokefree Environments and Regulated Products Act 1990 (Hardie et al 2022).

There has been a rise in the prevalence of daily vaping in people aged 15 years and over between 2019/20 (3.5 percent) and 2022/23 (9.7 percent) (Ministry of Health 2023c). Over the same period, the prevalence of adult daily smoking decreased from 11.9 percent in 2019/20 to 6.8 percent in 2022/23 (Ministry of Health 2023c).

The legislation passed in Aotearoa in 2020 tried to prevent the normalisation of vaping and discourage non-smokers, especially children, adolescents, and young people, from taking up vaping (Smokefree Environments and Regulated Products (Vaping) Amendment Act 2020). The regulatory measures included:

- prohibiting the sale of vapes to people younger than 18 years
- establishing specialist vape retailers (SVRs)
- mandating indoor workplace areas and certain public enclosed areas to be vape free in addition to being smokefree, except SVRs
- restricting promotion of and communication about vapes aside from at the point-of-sale, and in the case of SVRs, through limited communications with existing customers (Smokefree Environments and Regulated Products (Vaping) Amendment Act 2020).

General vaping retailers, such as petrol stations, supermarkets, and dairies, are restricted to selling three flavours (tobacco, menthol, and mint), but SVRs are permitted to sell the full range of flavours (Smokefree Environments and Regulated Products (Vaping) Amendment Act 2020).

In September 2023, new Approved Vaping Premises were required to be at least 300 metres from schools and marae (Ministry of Health 2023b). The Smoke-free Environments (Prohibiting Smoking in Motor Vehicles Carrying Children) Amendment Act passed in 2020

banned smoking and vaping in motor vehicles carrying children and young people under 18 years. More recently, vaping regulations under the Smokefree Environments and Regulated Products Amendment Regulations 2023 (Ministry of Health 2023b) required vaping products to meet Product Safety Requirements, including having removable batteries, child safety mechanisms, and maximum nicotine concentrations (disposable vapes capped at 20 mg/mL and reusable vapes containing nicotine salt capped at 28.5 mg/mL). Additionally, only vaping products with permitted flavour descriptions can be sold. Vaping products with toys or cartoon images were banned.

Regulatory changes designed to address the increasing prevalence of youth vaping have been announced for future implementation and include a ban on the manufacture and sale of disposable vaping products (Costello 2024). Disposable vaping products appeal to many young people due to their low cost and ease of use and access (Hardie et al 2024).

Vaping and equity

Vaping has been increasing in Māori and Pacific Peoples since nicotine vapes were legally available for retail in 2018. Overall, the percentage of people aged 15 years and over who vaped daily in Aotearoa in 2022/2023 was 9.7 percent, but this percentage was much higher in Māori (23.5 percent) and Pacific Peoples (18.7 percent) (Ministry of Health 2023c).

On one hand, this could be seen as a good result for public health because it appears that many people have switched from smoking to vaping. As vaping has increased, smoking prevalence has declined, especially in Māori women (Health Promotion Agency 2019; Ministry of Health 2023c). On the other hand, there is evidence that many Māori young people who have never smoked have taken up vaping (Walker et al 2020), and any harms associated with vaping will inequitably affect Māori (The Royal New Zealand College of General Practitioners 2023). The higher prevalence of vaping among Pacific people, a youthful population, may expose future generations to greater harm from vaping and nicotine addiction (Te Whatu Ora 2023).

Vaping prevalence also differs by socioeconomic status, with higher percentages of people aged 15 years and over vaping daily in 2022/2023 in more deprived neighbourhoods (15.8 percent in the most versus 4.4 percent in the least deprived neighbourhoods) (Ministry of Health 2023c). The prevalence of vaping is also higher in disabled people compared with non-disabled people. 14.2 percent and 9.3 percent of disabled and non-disabled people, respectively, vaped daily in Aotearoa in 2022/2023 (Ministry of Health 2023c). More socioeconomically deprived neighbourhoods and disabled people also demonstrate higher smoking prevalence compared to less deprived neighbourhoods and non- disabled people, respectively (Ministry of Health 2023c).

Dual use, or the interchangeable and concurrent use of vapes and cigarettes, may represent a transition period before stopping tobacco smoking altogether (Pisinger and Rasmussen 2022). The prevalence of daily vapers in the general population who also currently smoke and so are dual users was 22 percent in 2021/22, while in young people aged 15–17 years, the prevalence was lower at 6 percent (Ministry of Health 2023a). The prevalence of daily vapers who also smoke in Māori and Pacific Peoples was higher than in the general population, at 28 percent and 35 percent, respectively (Ministry of Health 2023a).

Vaping and young people

The sharp rise in daily youth vaping prevalence between 2019 (3.1 percent) and 2021 (9.6 percent) may have plateaued, according to the annual ASH (Action for Smokefree 2025) Survey (Action for Smokefree 2025 (ASH) 2021, 2023). In 2023, this survey showed that

10.0 percent of students aged 14 to 15 vaped daily, and 16.4 percent regularly (daily, weekly, or monthly). In the same year, the regular and daily vaping prevalences were far higher in Māori aged 14–15 years, at 32.0 percent and 22.3 percent, respectively. Similar to trends in adult smoking and vaping, the rise in youth vaping occurred following a decline in youth cigarette smoking (Action for Smokefree 2025 (ASH) 2023).

Again, there is a point of tension. While vapes are smoking cessation aids for adults who smoke, youth vaping has increased despite current regulatory settings, driven by a rapidly evolving product range and youth-targeted marketing (Hardie et al 2023). Examples of product design and marketing that appeal to young people include enticing fruit and candy vape flavours (Hardie et al 2022) and using online influencers and social media content to promote vapes in a targeted and widespread manner (Hardie et al 2023).

Some studies have suggested that young people who start nicotine use by vaping may be more likely to go on to start smoking (the “gateway theory”) (Baenziger et al 2021; National Academies of Sciences, Engineering, and Medicine 2018). However, according to US data, the association between vaping and starting smoking in young people is as yet unclear. If it exists, the risk is small, with few young people likely to continue smoking once they start, regardless of their baseline vaping status (Sun et al 2023). Increases in vaping in NZ young people, along with historic declines in smoking prevalence in this group, suggest that vaping may have contributed to displacing smoking (Walker et al 2020).

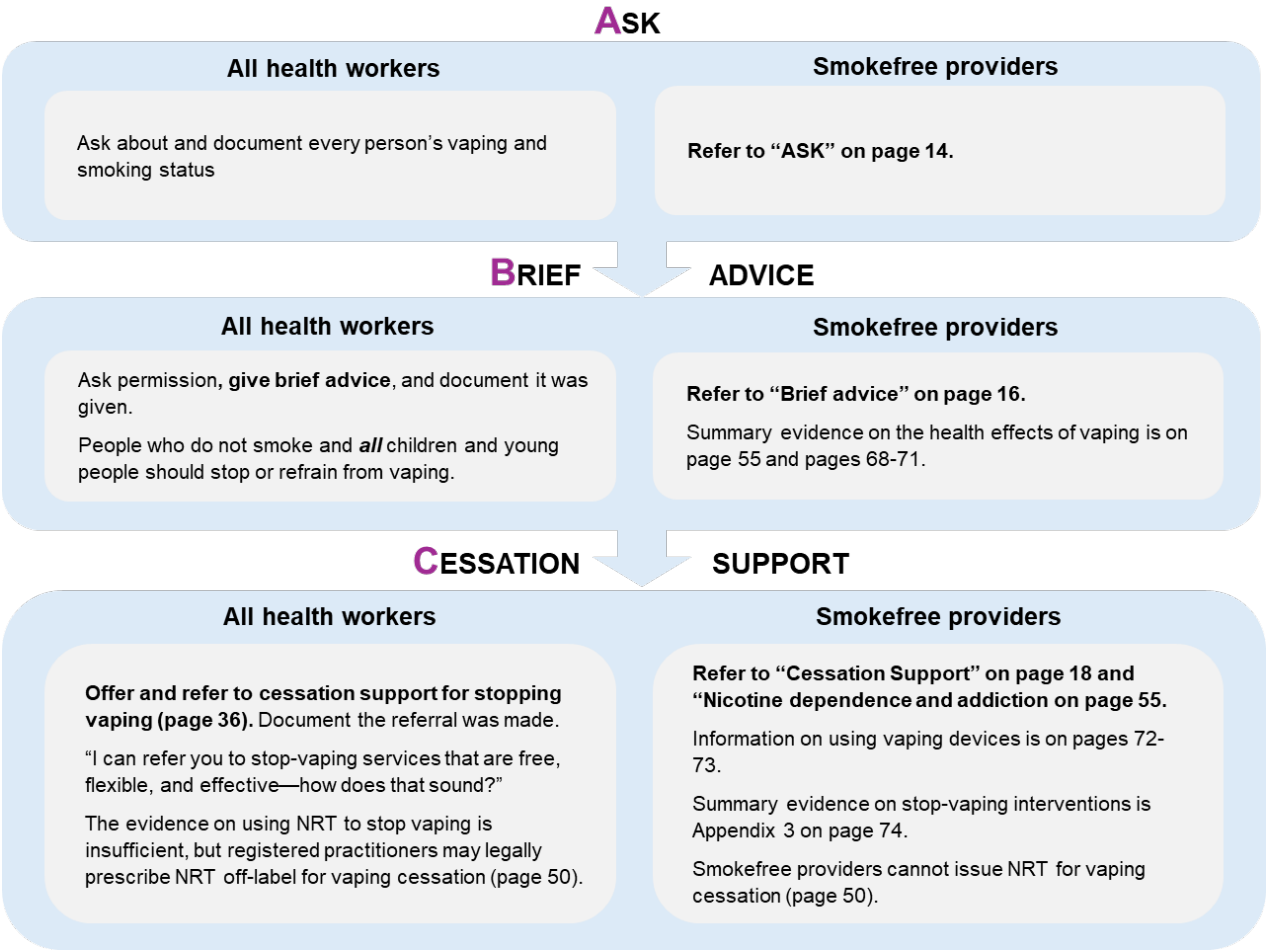
Another explanation for the connection between vaping and starting smoking in young people is the “common liability theory”. Youth experimentation with multiple tobacco or nicotine products is popular in a complex tobacco marketplace, and any such product use may be associated with starting smoking (Delnevo 2023).

ABC: Vaping Cessation

This section draws upon the 'ABC' framework ('Ask, give Brief advice, provide Cessation support') for smoking cessation to provide practical guidance for health workers on supporting people to stop vaping.

If you are a health worker, follow the left side of the diagram to screen for vaping and smoking, give brief advice, and make a referral to Smokefree Services.

If you are a Smokefree Service provider or a health worker with expertise and time to provide support, follow the right side of the diagram to navigate to the relevant sections of the Guidance to take a detailed history, give further advice, and provide cessation support.



Ask

Vaping Cessation

Use this section if you are a Smokefree Service provider or a health worker with expertise and time to provide further support and to take a detailed history as part of the 'Ask' step of the ABC pathway.

Key Points

Take a vaping and smoking history for all clients.

- 'Do you currently vape?'
- 'Do you currently smoke cigarettes?' (Assess dual use)
- 'Have you ever smoked?' (Ex- vs never-smoker)
- 'When did you first start vaping?'
- 'How often do you vape (daily / weekly / monthly / less than monthly)?'

Assess nicotine vaping dependence.

- Time to first vape
- Previous unsuccessful vaping quit attempts
- Self-perceived addiction to nicotine vaping

Assess risk of smoking relapse or uptake.

- 'On a scale of 1 to 10, where one is not at all confident and 10 is extremely confident, how confident are you that if you stop vaping, you will **not** be tempted to smoke a single puff of tobacco?'

Take a vaping and smoking history for all clients.

- All health workers can screen people attending a health care service for vaping, smoking, and dual use of vaping and smoking.
- Taking a partial vaping history is better than not asking at all.
- It is important to ask about smoking tobacco because many people who vape may also smoke currently or in the past.

- Discussions about vaping should begin with people as young as 12 years of age or even younger when appropriate.
- Document smoking and vaping status in the client's clinical records in provided templates or as free text[1].

Assess nicotine vaping dependence[2] (Table 1)

Table 1. Assess nicotine vaping dependence

Time to first vape	'How long after waking do you vape?' Vaping within 30 minutes of waking in the morning indicates higher dependence.
Previous unsuccessful vaping quit attempts	'Have you ever tried stopping vaping before?' Having previous unsuccessful quit attempts indicates nicotine vaping dependence.
Self-perceived addiction to nicotine vaping	'Would you say that you are very addicted to vaping, somewhat addicted to vaping, or not at all addicted to vaping?' Self-perceived nicotine vaping addiction is significantly associated with validated nicotine vaping dependence scales (Camara-Medeiros et al 2021).

Assess risk of smoking relapse or uptake

- Ask your client how confident they feel about stopping vaping right now, without relapsing back to or taking up smoking:

  'On a scale of 1 to 10, where one is not at all confident and 10 is extremely confident, how confident are you that if you stop vaping, you will **not** be tempted to smoke a single puff of tobacco?'
- If your client responds with lower than a seven or eight, advise a more gradual plan for reducing vaping over several weeks or months.
- If your client indicates feeling not confident about staying free of tobacco smoking, delay vaping cessation and explore when a good time to stop vaping would be.

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[1] Codes for recording vaping status can be found here: www.health.govt.nz/our-work/preventative-health-wellness/smokefree-2025/information-practitioners-patients-who-are-quitting-smoking/recording-vaping-status

[2] Use the Hooked on Nicotine Checklist (HONC) vaping dependence scale validated for *youth* (Hadland and Chadi 2020): www.aap.org/globalassets/tobacco/hooked-on-nicotine-checklist-honc-scale-and-scoring.pdf The following vaping dependence scales have been validated for use with *adults* (Buu et al 2021):

- e-FTCD (e-cigarette Fagerström Test of Cigarette Dependence). Link: https://intrepidlab.ca/en/Pages/electronic- nicotine-delivery-systems-(ends).aspx
- e-WISDM (e-cigarette Wisconsin Inventory of Smoking Dependence). Link: https://arc.psych.wisc.edu/self- report/wisconsin-index-of-smoking-dependence-motives-wisdm/
- PS-ECDI (Penn State Electronic Cigarette Dependence Index). Link: https://research.med.psu.edu/smoking/dependence-index/

Brief advice

Vaping Cessation

Use this section if you are a Smokefree Service provider or a health worker with time and expertise to provide support and to give further advice as part of the 'Brief advice' step of the ABC pathway.

Key Points

Ask permission before giving personalised advice on stopping vaping.

- 'I have some information to share with you, and it's up to you how you use it – would you like to hear more?'

Outline the health risks of vaping and the health benefits of stopping vaping (page 68).

- People who do not smoke and all children, adolescents, and young people should stop or refrain from vaping.
- There is limited evidence on the long-term effects of vaping. Stop or refrain from vaping to avoid potential harms to the body, exposure to cancer-causing chemicals, and nicotine dependence or addiction.

Ask permission before giving personalised advice on stopping vaping.

Asking permission is a new recommendation included in the 'ABC pathway for helping people to stop smoking' since *The New Zealand Guidelines for Helping People to Stop Smoking: 2021 Update*.

Asking permission before giving advice is an important part of shared decision-making and enhances client engagement. For example: 'I have some information to share with you, and it's up to you how you use it – would you like to hear more?'

Adopt a person-centred and non-judgemental approach and give clear, supportive, and personalised advice on the benefits of stopping vaping. For example, link advice on the health effects of vaping to a current health condition.

Outline the health risks of vaping and health benefits of stopping vaping: see page 68 for more evidence-based information on the health effects of vaping by organ system.

- People who do not smoke and *all* children, adolescents, and young people should stop or refrain from vaping.
- There is limited evidence on the effects of vaping on many health outcomes, particularly on its long-term effects. Based on the current evidence, advise clients to stop or refrain from vaping to avoid harming their physical health (for example, potential harms to their lungs, heart, blood vessels, teeth, and gums), to avoid exposure to inhaling cancer-causing chemicals, and to avoid nicotine dependence or addiction.
- Based on the current evidence, children, adolescents, and young people should be discouraged from vaping to avoid harming their bodies, which may include their brains, and to avoid nicotine dependence or addiction.

Cessation support

Vaping Cessation

Use this section if you are a Smokefree Service provider or a health worker with time and expertise to provide further behavioural stop-vaping support as part of the 'Cessation' step of the ABC pathway.

There is currently insufficient evidence for the use of NRT or any medications for the indication of vaping cessation (page 75). Smokefree Service providers cannot issue NRT for vaping cessation (page 50).

Robust data testing behavioural stop-vaping interventions are limited. Use a person-centred approach when discussing the options and the lack of evidence about what is most effective for vaping to help clients make an informed decision. Refer to page 74 for evidence on behavioural stop-vaping support and other forms of stop-vaping interventions.

The current consensus view is that both adults and youth who vape exclusively may be offered a combination of behavioural therapy strategies to help stop vaping, including **abrupt or gradual vaping cessation in combination with behavioural counselling**.

Key Points

Offer everyone behavioural stop-vaping support. 'I can refer you to (or provide) stop-vaping services that are free, flexible, and effective – how does that sound?'

Explore reasons for stopping vaping. 'What are the good and not so good things about vaping?'

Explore the importance of stopping vaping. 'On a scale of 1 to 10, where one is not at all important, and 10 is extremely important, how important is it for you to stop vaping now?'

Support abrupt or gradual vaping cessation.

Plan behavioural change techniques to stop vaping.

- Consider your approach to vaping cessation support.
- Manage cravings and withdrawal symptoms.
- Change habits.
- Set personal rules and boundaries.
- Build social support.

Plan behavioural change techniques to prevent relapse to smoking or vaping.

- Optimise when to stop vaping.
- Manage relapse back to vaping and/or smoking.

Arrange follow-up. Offer ongoing support and decide timeframes for follow-up.

Offer everyone behavioural stop-vaping support.

- If a discussion about stopping vaping has occurred, consider personalising and framing the offer with a reflection of the client's reasons or goals for stopping: 'It sounds like you have some concerns about your vape use or would like to stop vaping. I can refer you to (or provide) free, flexible, and effective services to help you with your concerns – how does that sound?'
- If clients indicate that they are not yet confident about staying smokefree without a single puff of tobacco, make a "back pocket" offer of stop-vaping support. For clients who used vaping to stop smoking, you could say:

  'I'm hearing that you have recently stopped smoking and that your vape is keeping you smokefree. Congratulations on reducing the risk to your health. When you are confident you can remain smokefree when making changes to your vaping, without a single puff of tobacco, support to stop vaping is available. I can give you their details now for safekeeping if that's helpful; what do you think?'

Explore reasons for stopping vaping.

- Explore the advantages and disadvantages of vaping:

  'What are the good and not so good things about vaping?'
  'What are the best and worst outcomes of stopping vaping?'
  'What are the benefits and costs of stopping vaping?'

- Explore your clients' future goals and life satisfaction and how continuing vaping may affect these goals.
- Some reasons to stop vaping are valid, while some are due to misconceptions about the harms of vaping relative to smoking, which are important to address in people who are using vaping to stop smoking and who are at risk of relapsing back to smoking. Refer to the sections 'Harms of vaping compared to smoking' and 'Health effects of vaping' to clarify misconceptions.
- Reasons to stop may include saving money, the health effects of vaping, and the consequences of vaping on loved ones (Tran et al 2024). The most typical reason for stopping vaping is for health reasons, which puts health workers in a good position to discuss the health effects of vaping when providing cessation support (Lin et al 2024). Use the identified reasons to encourage your client to stay focused when facing cravings or withdrawal symptoms.

Explore the importance of stopping vaping.

- Ask how important stopping vaping is at the moment: 'On a scale of 1 to 10, where one is not at all important, and 10 is extremely important, how important is it for you to stop vaping now?'
- If low importance: explore and increase the importance of stopping, for example*:* 'What would it take to make it more important for you to stop vaping?'

- If high importance but low confidence, explore barriers and previous successes to increase confidence, for example:

  'What do you see as the barriers to your quit attempt?'
  'What successes have you had with past quit attempts?'
  'What helped you to be successful then?'

- If high importance and high confidence, strengthen the commitment to stop by asking the main reasons for stopping and emphasising the positive changes in the lives of your client and their family.

Support abrupt or gradual vaping cessation.

Support abrupt vaping cessation

1. Agree on a date to stop vaping outside of periods of exceptional stress. Discuss healthy ways to manage stress levels in preparation for the quit.
2. Identify and avoid situations that trigger a desire to vape. Develop plans for each trigger, such as distractions (e.g., a sport or new hobby) and stress coping mechanisms.
3. Set up a support network.
4. Focus on the reasons for and benefits of not vaping.

OR

Create a plan for gradual vaping cessation ("cutting down", "weaning", "tapering")

1. Agree on a date to start the stop-vaping plan outside of periods of exceptional stress. Discuss healthy ways to manage stress levels in preparation for the quit.

2. Tailor the treatment duration to individual needs and the smoking relapse risk. The suggested duration of support to stop vaping gradually is a minimum of 8–12 weeks. High nicotine dependence may indicate a need for a slower nicotine reduction plan. The nicotine reduction plan should be client-led; clients can usually manage the reduction speed themselves.

3. Set goals to reduce the time spent vaping or the e-liquid nicotine strength.

   Reduce the time spent vaping: extend the time between sessions, including the time to first vape on waking, and reduce the number of puffs.

   Reduce the nicotine strength: an example of a gradual nicotine reduction plan is to decrease the e-liquid nicotine strength or amount every two to four weeks or longer until reaching zero (e.g., 20 mg–18 mg–12 mg–6 mg–3 mg–0 mg).

   Suggest two vapes to help with nicotine tapering: one at the current nicotine strength and another at a lower (or even zero) strength to use in the first instance.

4. Instead of using one strategy alone, consider reducing the nicotine strength and decreasing the time spent vaping (or the frequency and duration of sessions) together. To do this, alternate between reducing the nicotine strength while keeping the time spent vaping the same, and decreasing the time spent vaping while keeping the nicotine strength the same. Each change can take place weekly.

5. Keeping a diary can help clients develop insight into the amount of nicotine they vape. Suggest a physical or digital diary or app to record changes to the nicotine strength and the vaping frequency, duration, and timing, including evening and nighttime sessions. Clients may also find it helpful to track money spent on vapes.

The following are practical considerations for gradual vaping cessation.

- Consider the risk of ongoing vaping when deciding whether to go ahead with a gradual nicotine vape taper. On the other hand, the taper may increase client engagement by enabling them to work towards a quit date.
- It is important to find a vape with adequate nicotine strength from generic or specialist vape retailers and to learn how to get enough nicotine from vaping:
    - to minimise more frequent vaping, also known as grazing. Vaping at lower nicotine concentrations may not be safer and may lead to more harm if it results in grazing, which is linked with increased exposure to substances that are potentially harmful to the body (Kochvar et al 2024)
    - to reduce withdrawal symptoms and urges to smoke and to decrease the risk of relapse back to smoking (if an ex-smoker) or the risk of smoking uptake (if a never-smoker).
- If your client cannot use vaping products that allow for reductions in nicotine concentration, use strategies to stop vaping gradually that reduce the time spent vaping instead (see page 22).
    - Examples of vaping products that may not be available in a variety of nicotine strengths or at the strength required include disposable vapes (although an announcement has been made on banning disposable vapes in the future) and certain flavours of reusable vape products.

Plan behavioural change techniques to stop vaping.

Consider your approach to vaping cessation support.

- Consider wider psychological, behavioural, social, and cultural factors affecting a person's smoking or vape use, for instance, partner vaping (Zawertailo et al 2023).
- Use OARS: Open-ended questions, Affirmations, Reflections, Summaries (Britt et al 2014).
- Use language that encourages your client to enact change: 'How would you like things to be different?' (Britt et al 2014).
- Use a strengths-based approach when engaging clients in weighing the advantages and disadvantages of smoking or vaping and when identifying specific goals for stopping vaping (Becker and Rice 2022).
- Group-based cessation may be more acceptable for some clients.
- Consider involving your client's social network and family members to increase their motivation to stop vaping.
    - Māori and Pacific Peoples may prefer whānau- (family) based cessation (Strickett et al 2021).

- Integrating peer support may improve treatment adherence and success in mental health service users (The Centre for Addiction and Mental Health 2022). Involving partners in pregnant people and family in youth may be crucial to the success of the quit attempt (Gould et al 2014; Hadland and Chadi 2020).

Manage cravings and withdrawal symptoms.

- Reassure your client that withdrawal symptoms are normal and expected when stopping vaping. The long-term benefits of stopping outweigh the short-term discomfort of withdrawal symptoms.
- Withdrawal symptoms may include cravings, low mood, irritability, anger, frustration, disturbed sleep, poor concentration, and increased appetite.
- Withdrawal symptoms can be strong, particularly in the first week after stopping vaping, and should typically reduce after the first four weeks.
- Discuss your client's vaping triggers and plan how to avoid them, particularly in the first four weeks, to prevent going back to increased vaping.
- Try the four D's (distract, delay, deep breathing, and drinking water) to manage triggers and cravings, and brainstorm other ways that work for your client (e.g., chewing gum, having sugar- free mints, exercising, listening to music, playing a video game).
- Encourage your client to practice healthy ways to manage mood or stress levels. Engaging in outdoor activity may be helpful to manage withdrawal symptoms and stress (Gwon et al 2024).
- Abruptly stopping vaping may cause withdrawal symptoms. A step-down approach helps to minimise nicotine withdrawal symptoms, although it may still cause some withdrawal symptoms.
- If using a gradual method to stop vaping, recommend slowing down the nicotine reduction or the decrease in vaping frequency or duration if your client experiences strong urges to smoke tobacco or strong withdrawal symptoms. Go back to the next highest nicotine strength or increase vape use until these feelings go away.

Change habits.

- Identify routines around how much, when, and where clients vape. Discuss how to change these routines and how to replace vaping with other activities.
- Encourage clients to change to a vape flavour they like less.
- Encourage clients to keep the vape out of sight and increase the time they choose not to carry it.
- Encourage clients to get rid of vaping paraphernalia.
- Vaping helps to stop smoking because it replicates the habitual hand-to-mouth action in smoking (Holliday et al 2021). Try another object to replace the device your client

would otherwise hold and vape, such as a small fidget toy or a stress ball (Hadland and Chadi 2020).

- Set short-term goals and plan rewards for reaching these milestones.

Set personal rules and boundaries.

- Encourage clients to set their own rules about when, where, and how much vaping occurs. Setting rules is critical to help prevent bad vaping habits from forming and weakens the link between vaping and specific situations. Examples include:
    - no vaping in certain places, including where it is prohibited, such as at work, school, home, or in the car
    - no vaping in certain situations, such as after meals, with hot drinks, and when socialising – make vaping a stand-alone task separate from these activities.

Build social support.

- Discuss with clients how they would like to tell friends and whānau that they are stopping vaping, and encourage them to find support (e.g., family, friends, co-workers, stop-vaping buddies, stop smoking coaches).
- Encourage your client to make a promise to someone to stop or to adhere to a vaping rule.

Plan behavioural change techniques to prevent relapse to smoking or vaping.

- It is important to stop vaping in a way that prevents relapse back to tobacco smoking (if an ex- smoker) or the uptake of smoking (if a never-smoker).

Optimise when to stop vaping.

- Clients should stop smoking all tobacco before starting to stop vaping, including small amounts of tobacco mixed with other substances such as cannabis. If clients do not stop smoking all tobacco before attempting to stop vaping, they will have an increased risk of relapse to smoking when trying to reduce or stop their vaping.
- Advise clients to plan to stop vaping only if they feel confident about staying smokefree, without a single puff of tobacco.

Manage relapse back to vaping and/or smoking.

- If your client relapses, congratulate them on stopping, no matter the duration. Ask them what helped to stop and what led them to vaping again.
- If vaping helps with smoking cessation, there is no rush to stop, particularly if your client has recently stopped smoking tobacco or if they feel at risk of relapse. The priority here is to avoid relapse back to smoking tobacco (if an ex-smoker).
- Remind ex-smoking clients that going back to vaping is not a failure as it is less harmful than tobacco smoking.
- Remind clients that it may take multiple attempts to stop for good. Each attempt is a new chance to figure out strategies that work, and each attempt takes your client closer to stopping for good.
- For people who relapse back to smoking and who have tried approved smoking cessation interventions without success, attempt another trial of stopping vaping as outlined on page 22.
- For people who have never smoked and take up smoking, refer to *The New Zealand Guidelines for Helping People to Stop Smoking: 2021 update*.
- For people who have stopped smoking and/or vaping, health care providers should regularly screen for relapse.

Arrange follow-up.

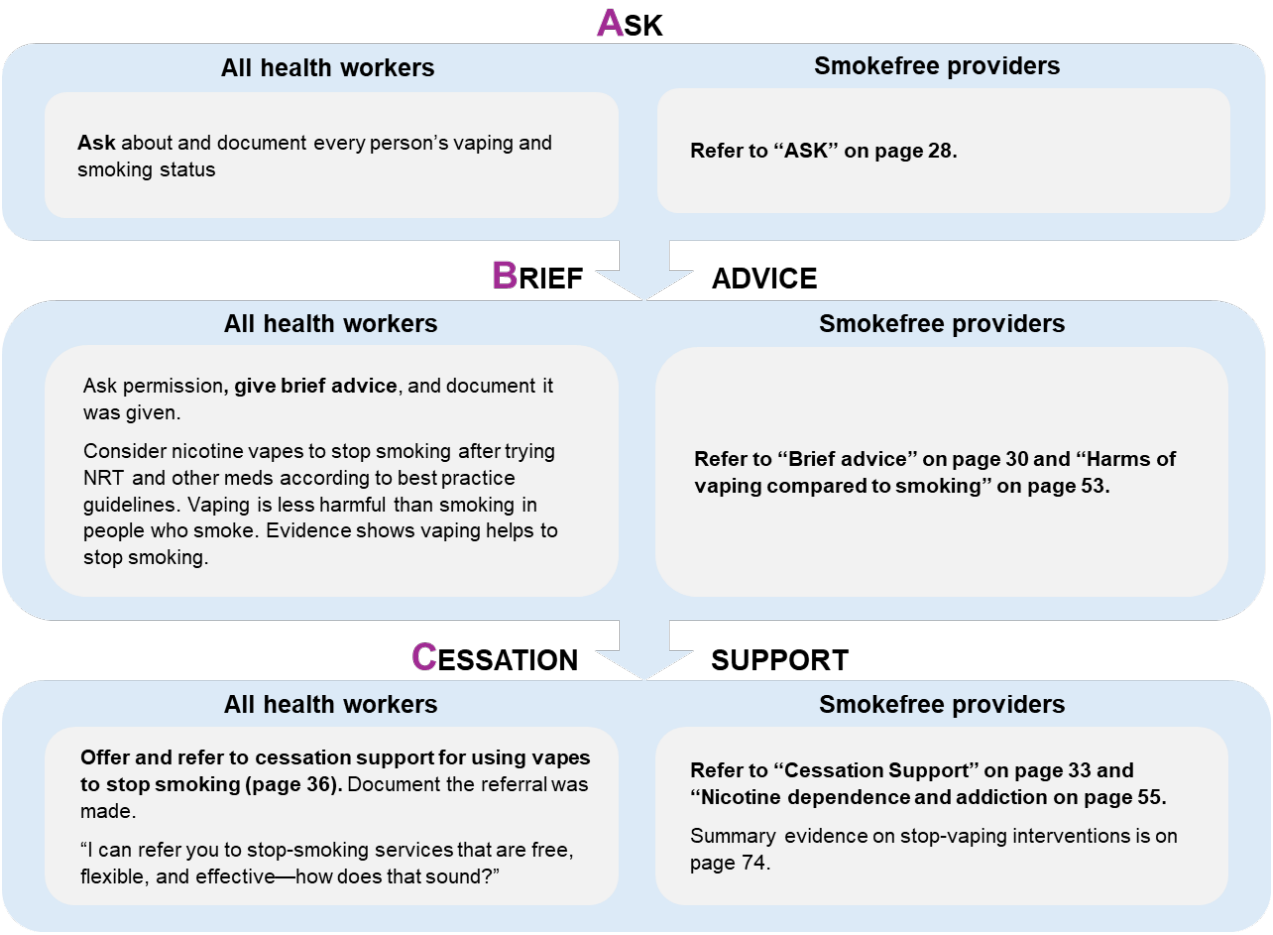
- Offer ongoing support and decide follow-up timeframes to re-evaluate treatment plans.
- Proactively contact your client when they reach 12 weeks vape free.
- The duration of follow-up in studies on vaping cessation interventions in people who used to smoke and in non-smokers is variable, extending up to seven months (Amin et al 2023; Huerne and Eisenberg 2023; Kundu et al 2023).
- The effectiveness of behavioural therapy in vaping cessation may also depend on the frequency of follow-up (Huerne and Eisenberg 2023).

ABC: Vaping to stop smoking

This section draws upon the 'ABC' framework ('Ask, give Brief advice, provide Cessation support') for smoking cessation to provide practical guidance for health workers on supporting people to use vaping to stop smoking.

If you are a health worker, follow the left side of the diagram to screen for smoking, give brief advice, and make a referral to Smokefree Services.

If you are a Smokefree Service provider or a health worker with expertise and time to provide support, follow the right side of the diagram to navigate to the relevant sections of the Guidance to take a detailed history, give further advice, and provide cessation support.



Ask

Vaping to stop smoking

Use this section if you are a Smokefree Service provider or a health worker with expertise and time to provide further support and to take a detailed history as part of the 'Ask' step of the ABC pathway.

Key Points

Take a smoking history for all clients.

- 'Do you currently smoke?'

Assess smoking dependence.

- Time to first cigarette
- Previous unsuccessful smoking quit attempts
- Self-perceived addiction to smoking

Take a smoking history for all clients.

- Refer to *The New Zealand Guidelines for Helping People to Stop Smoking: 2021 update.*
- All health workers can screen people attending a health care service for smoking.
- Taking a partial smoking history is better than not asking at all.
- Document smoking status in the client's clinical records in provided templates or as free text.

Assess smoking dependence (Table 2)

Table 2. Assess smoking dependence

Time to first cigarette	'How long after waking do you smoke?' Smoking within 30 minutes of waking in the morning indicates higher dependence.
Previous unsuccessful smoking quit attempts	'Have you ever tried stopping smoking before?' Having previous unsuccessful quit attempts indicates smoking dependence.
Self-perceived addiction to smoking	'Would you say that you are very addicted to smoking, somewhat addicted to smoking, or not at all addicted to smoking?' Self-perceived smoking addiction can be used as an indicator of dependence in general and clinical smoking populations (Chaiton et al 2017).

Brief advice

Vaping to stop smoking

Use this section if you are a Smokefree Service provider or a health worker with time and expertise to provide support and to give further advice as part of the 'Brief advice' step of the ABC pathway.

Key Points

Ask permission before giving personalised advice on using vaping to stop smoking.

- 'I have some information to share with you, and it's up to you how you use it – would you like to hear more?'

Address misconceptions about vaping and outline the harms of vaping compared to smoking (see also page 53).

- For people who smoke, vaping is much less harmful than smoking.
- Nicotine vapes help people stop smoking.
- Vaping is not harmless: use nicotine vaping to stop smoking only after clients cannot stop smoking with current evidence-based approaches (NRT or non-NRT medications in combination with behavioural support and by best practice guidelines).
- Dual use of vapes and cigarettes is not advised.
- There is a risk of relapse back to smoking when vaping to stop smoking.
- The end goal is to stop smoking and vaping.

Ask permission before giving personalised advice on using vaping to stop smoking.

Asking permission is a new recommendation included in the 'ABC pathway for helping people to stop smoking' since *The New Zealand Guidelines for Helping People to Stop Smoking: 2021 Update.*

Asking permission before giving advice is an important part of shared decision-making and enhances client engagement. For example: 'I have some information to share with you, and it's up to you how you use it – would you like to hear more?'

Adopt a person-centred and non-judgemental approach and give clear, supportive, and personalised advice on the benefits of vaping to stop smoking. For example, discuss how

vaping can help your client be smokefree and that this is the best thing that they can do for their health, linking the advice to a current health condition.

In New Zealand, many people who currently smoke or recently stopped smoking incorrectly believe that vapes are as or more harmful compared to cigarettes or are unsure about whether vapes are less harmful than cigarettes (Guiney et al 2019). Use these talking points to address misconceptions about vaping and outline the harms of vaping compared to smoking (see also page 53).

For people who smoke, vaping is less harmful than smoking.

- Up to two in three smokers will die from smoking unless they stop (Banks et al 2015).
- Smoking cigarettes involves the combustion or burning of tobacco, which creates cancer-causing substances.
- Vapes heat e-liquids, which do not contain tobacco. The process of vaping does not involve the combustion or burning of tobacco.
- Nicotine in any form of delivery can be addictive, but it does not cause cancer.
- Based on evidence from a small number of studies, with the longest follow-up duration being two years (Lindson et al 2024), there is no serious harm from nicotine vaping.

Vaping helps people to stop smoking.

- Vaping increases the chance of remaining smokefree by allowing people to manage nicotine cravings without the more harmful toxicants from burning tobacco when smoking cigarettes.
- Vaping also provides many of the behavioural and social aspects of smoking, which can be barriers to smoking cessation.
- Nicotine vaping may not eliminate all nicotine withdrawal symptoms, compared to smoking cigarettes. Communicate to your client that you can help them with ways to minimise nicotine withdrawal symptoms, such as finding an appropriate e-liquid nicotine strength.
- Nicotine vaping can help people stop smoking even when they do not intend or want to stop smoking (Cobb et al 2021; Kasza et al 2022; Lindson et al 2024).

Vaping is not harmless.

- Since vaping is not harmless, people who smoke should try to stop smoking using current evidence-based approaches as first-line therapy (NRT or non-NRT medications in combination with behavioural support and by best practice guidelines) (Ministry of Health 2021a).
- If people who smoke cannot stop smoking using current evidence-based approaches, they can try nicotine vaping to stop smoking.

Dual use is not advised.

- Dual use (using vapes and cigarettes interchangeably) is not advised because most of the harms of smoking remain, even with a few cigarettes.
- If possible, clients should stop smoking entirely and switch to nicotine vaping.

There is a risk of relapse back to smoking.

- There is a risk of relapse back to smoking for people who have stopped smoking using vapes, including after they stop smoking and are exclusively vaping and when they make a stop-vaping attempt.
- Once relapse back to smoking tobacco is not so much of a concern, clients should ideally stop vaping, usually after 12 weeks of vaping with cessation support.

The end goal is to stop smoking AND vaping.

- Advise clients that the end goal is to be smokefree and vape free.
- Emphasise the importance of support from a Smokefree Service provider or Quitline when clients are stopping vaping.

Cessation support

Vaping to stop smoking

Use this section if you are a Smokefree Service provider or a health worker with time and expertise to provide further behavioural stop-smoking support using vapes as part of the 'Cessation' step of the ABC pathway.

There is currently no agreement on a recommended approach to support people vaping to stop smoking. The evidence is unclear on whether gradual or abrupt smoking cessation is more effective when using vaping to stop smoking. Taking a person-centred approach by providing information to help clients make an informed decision is an essential first step.

Key Points

Offer behavioural stop-smoking support using vapes. 'It sounds like you have tried stop- smoking medication before and would now like to try vapes to stop smoking. I can refer you to (or provide) free, flexible, and effective services to help you stop smoking in this way– how does that sound?'

Explore reasons for stopping smoking. 'What are the good and not so good things about smoking?'

Explore the importance of stopping smoking. 'On a scale of 1 to 10, where one is not at all important and 10 is extremely important, how important is it for you to stop smoking now?'

Support using vaping to stop smoking.

Arrange follow-up. Offer ongoing support and decide timeframes for follow-up.

Offer behavioural stop-smoking support using vapes.

- Offer nicotine-containing vapes, with or without nicotine-free vapes, to support smoking cessation in people who smoke cigarettes and who:
    - have tried stop-smoking medication with behavioural support
    - show interest in using vaping to stop smoking.

- Check if your client used stop-smoking medication correctly; if not, consider a re-trial.
- Refer to *The New Zealand Guidelines for Helping People to Stop Smoking: 2021 Update* for information on stop-smoking medications.
- If a discussion about stopping smoking has occurred, consider personalising and framing the offer with a reflection of the clients' reasons or goals for stopping: 'It sounds like you have tried stop- smoking medication before and would now like to try vaping to stop smoking. I can refer you to (or provide) free, flexible, and effective services to help you stop smoking in this way– how does that sound?'

Explore reasons for stopping smoking.

- Explore the advantages and disadvantages of smoking:

  'What are the good and not so good things about smoking?'
  'What are the best and worst outcomes of stopping smoking?'
  'What are the benefits and costs of stopping smoking?'

- Explore your client's future goals and life satisfaction and how continuing smoking may affect these goals.
- Use the identified reasons to encourage your client to stay focused when facing cravings or withdrawal symptoms.

Explore the importance of stopping smoking.

- Ask how important stopping smoking is at the moment: 'On a scale of 1 to 10, where one is not at all important and 10 is extremely important, how important is it for you to stop smoking now?'
- If low importance: explore and increase the importance of stopping, for example: 'What would it take to make it more important for you to stop smoking?'
- If high importance but low confidence, explore barriers and previous successes to increase confidence, for example:

  'What do you see as the barriers to your quit attempt?'
  'What successes have you had with past quit attempts?'
  'What helped you to be successful then?'

- If high importance and high confidence, strengthen the commitment to stop by asking the main reasons for stopping and emphasising the positive changes in the lives of your client and their family.

Support using vaping to stop smoking.

- Agree on a date to stop smoking outside of periods of exceptional stress. Discuss healthy ways to manage stress levels in preparation for the quit.
- Recommend closed devices with sealed and prefilled pods for new vapers. These pods are easy to use, avoid contact with nicotine, and do not allow people to add other substances to the e-liquid.

- Advise clients to vape to relieve urges to smoke and withdrawal symptoms by taking 10 to 12 long, slow puffs of approximately three to four seconds each (Mendelsohn and Beaumont 2022). They may also take one or two puffs when needed to relieve cravings and withdrawal symptoms.
- Tell clients that cough and mouth or throat irritation are the commonest side effects of vaping and typically settle over time (Mendelsohn and Beaumont 2022).
- Strongly encourage clients to set their own rules and boundaries early in the stop-smoking attempt about when, where, and how much vaping occurs. Setting rules is critical to help prevent bad vaping habits from forming, which may hinder efforts to stop vaping later. Examples of personal rules and boundaries include no vaping in certain places, including where it is prohibited, and no vaping in certain situations, such as after meals, with hot drinks, and when socialising.
- Acknowledge that a person's self-perception in relation to smoking and vaping plays an important role in their decision to stop smoking. For people who want to stop smoking or stay smokefree, it may help them to know that they can change their identity from that of a smoker to a vaper.
- Ensure clients are aware that vaping to stop smoking requires ongoing persistence to resist physical and social smoking cues. Vaping may mimic smoking but may not be a complete replication of the smoking experience (Fredericksen et al 2023; Robertson et al 2023).

Arrange follow-up.

- Offer ongoing support and decide follow-up timeframes to re-evaluate treatment plans.
- Proactively contact your client when they reach 12 weeks smokefree.
- In smoking cessation, people typically use vapes over a longer time period than most smoking cessation medications (Ministry of Health 2021a), so the follow-up duration may exceed 12 weeks.
- People who used vaping to stop smoking usually feel confident that they can stop vaping without relapsing back to smoking cigarettes within three to six months after stopping smoking (Mendelsohn and Beaumont 2022).

Smokefree Services and other contacts

Use this link to help your client or patient find a nearby Smokefree Service and information about accessing Quitline: https://smokefree.org.nz/help-advice/stop-smoking-services

Quitline

Quitline is a 24/7 service. Quit Advisors work with clients to make a plan to stop smoking or vaping. Your client or patient can call Quitline free on 0800 778 778 or text 4006.

Reporting suspected adverse events

Accurate information about vaping relies on reporting by clinicians and clients of suspected adverse events related to vaping. Anyone who suspects that a vaping product has caused harm should report it to the Vaping Regulatory Authority via HARP (Health Advisory and Regulatory Platform): https://vaping.harp.health.nz/submissions/new

The ABC pathway for priority population groups

Use this section to consider key points at all stages of the ABC pathway for using vaping to stop smoking and vaping cessation in priority population groups.

Māori and Pacific Peoples

Ask

Stopping vaping

Using vaping to stop smoking

When working with Māori clients, consider incorporating tikanga Māori throughout the consult, if appropriate: mihi (greetings); karakia (say, or offer your client to say, a prayer to open and close the consult); and whakawhanaungatanga (making connections by sharing experiences that may relate to whenua, or land, and whānau, or family ties) (Britt et al 2014).

When working with Pacific clients, offering a greeting, saying or offering your client an opening and closing prayer, and making connections through shared experience may also be appropriate. Additionally, Pacific health and research frameworks such as talanoa and fonofale may inform engagement with Pacific clients. Talanoa refers to a holistic and collaborative style of face-to-face conversation (Vaioleti 2006). Fonofale is a holistic and dynamic model of health incorporating values, such as family and culture, represented using the concept of a fale or house (Minister of Health 2023; Pulotu-Endemann 2001).

Brief advice

Using vaping to stop smoking

Research on experiences with vaping in Māori and Pacific Peoples found broad agreement on the need for clear and accessible lay information online and in the health sector on the health effects of vaping compared to smoking and the benefits of vapes as smoking cessation aids (Health Promotion Agency 2019; Strickett et al 2021; Te Whatu Ora 2023). People instead seek information from whānau, friends, and colleagues with experience and knowledge of vaping due to this lack of clear and accessible information (Health Promotion Agency 2019; Strickett et al 2021; Te Whatu Ora 2023).

Consequently, there is uncertainty about the harms of vaping compared to smoking cigarettes in all population subgroups, including Māori and Pacific Peoples who smoke. Māori and Pacific Peoples are less likely to perceive vaping as less harmful than smoking (Guiney et al 2019; Health Promotion Agency 2019).

Clear communication about the relative harms of vaping versus smoking is necessary in all subgroups of smokers and recent ex-smokers, including Māori and Pacific Peoples, as misperceptions about the harms of vaping compared to smoking remain common (Guiney et al 2019).

Cessation support

Stopping vaping

Using vaping to stop smoking

Give Māori and Pacific Peoples the choice to consult with Māori and Pacific providers and to use language-appropriate services where possible. Ensure kaimahi (staff) seek training to provide technically and culturally safe support (Ministry of Health 2021b).

Consider involving whānau and community members in smoking and vaping cessation support, particularly peers and whānau with lived experience of using vaping to stop smoking and stopping vaping (Strickett et al 2021).

- Family, friends, and community influence Pacific peoples' uptake of vaping, including church and social media circles (Te Whatu Ora 2023).
- Whānau (including children) and friends are also significant influences on the uptake of vaping to stop smoking in Māori (Health Promotion Agency 2019; Strickett et al 2021).

Whānau-based support may be more appropriate than group-based cessation, which brings together strangers connected by the coincidental timing of their quit attempts, as opposed to by whānaungatanga (social and kinship ties) (Strickett et al 2021).

Using vaping to stop smoking

Māori and Pacific Peoples who smoke should try to stop smoking using NRT or non-NRT medications in combination with behavioural support in the first instance, and by best practice guidelines, before using vaping to stop smoking.

Wāhine Māori have higher smoking prevalences than non-Māori women and may benefit from vaping as a means to stop smoking if NRT or non-NRT medications with behavioural support, and by best practice guidelines, do not help to stop smoking (Health Promotion Agency 2019). The following are important considerations when providing smoking cessation support to this group:

- encouragement to persist with vaping in early uptake is critical: wāhine Māori who try vaping and relapse back to smoking cigarettes tend to do so within two weeks (Health Promotion Agency 2019)
- acknowledge that changing from smoking to vaping is challenging, takes time, and requires a change in self-perception. There tends to be a period of dual use of about three months before wāhine Māori who smoke fully change to vaping. The process of identifying as vapers (and non- smokers) tends to take two to three months after starting vaping (Health Promotion Agency 2019).

In Māori and Pacific Peoples who want to use vaping to stop smoking, it is important to find a device and regime appropriate to deliver the right amount of nicotine. The experience of changing from smoking to vaping depends on how satisfactory the experience of vaping is and the ability to source a device that meets the nicotine needs of the person (Strickett et al 2021; Te Whatu Ora 2023).

Pregnant or breastfeeding people

Ask

Stopping vaping

Using vaping to stop smoking

Smoking and vaping may be under-reported in the pregnant population. A quarter to over half of validated smokers in pregnancy may not report their smoking status (Shipton et al 2009), which may be due to feelings of social stigma and shame (Bar-Zeev et al 2023).

Avoiding moralistic and insensitive communication styles helps break down barriers to accurate self- disclosure (Bar-Zeev et al 2023). Instead of explaining what pregnant people should do or what is wrong with their current actions, adopt a non-judgmental approach by acknowledging the decision is their choice and focusing on providing an opportunity to make this informed choice (Bar-Zeev et al 2023). For example, saying: ‘This is your choice – we can discuss various options that help you and your baby’s health, to help you decide what you want to do’.

In Australian Indigenous contexts, a conversational style of screening may be helpful (Bar-Zeev et al 2023). For example, take a smoking or vaping history by asking your client to tell their smoking or vaping story.

Using vaping to stop smoking

Ask about the number of cigarettes consumed before and during the pregnancy in a non-threatening and non-judgmental way.

Many pregnant people attempt to reduce their smoking while pregnant (Gould et al 2014). The number of cigarettes that people report smoking during pregnancy may not accurately reflect their level of dependence or addiction before pregnancy (Gould et al 2014). It is important to ask about the number of cigarettes smoked before any recent changes to tobacco use, in addition to the number of cigarettes smoked while pregnant.

Stopping vaping

Ask about the concentration of nicotine consumed and the frequency of vaping during the pregnancy in a non-threatening and non-judgemental way.

Brief advice

Using vaping to stop smoking

Advise all pregnant people to stop all smoking as soon as possible in pregnancy, not just cut down. Assure your client that they and their baby will benefit, even if stopping late in the pregnancy. Ask permission to share information about the harms of smoking and vaping and personalise the advice where possible.

In people who smoke, vaping is considered less harmful in pregnancy compared to smoking tobacco, but vaping is not harmless. Only consider vaping in those unable or unwilling to use NRT medications to stop smoking according to best practice guidelines. Refer to The New Zealand Guidelines for *Helping People to Stop Smoking: 2021 Update* for information on stopping smoking in pregnancy.

Both nicotine and vaping e-liquid may be risky to the unborn baby. Communicate clearly with the pregnant person about the risks and benefits of nicotine vaping compared with ongoing smoking or other smoking cessation treatments during pregnancy. The following is a summary of advice about stopping smoking in pregnancy and using nicotine vaping to stop smoking while pregnant:

- smoking while pregnant delivers harmful substances from tobacco smoke, such as carbon monoxide, to the unborn baby
- any nicotine use (from smoking or vaping or NRT) by a pregnant person exposes the unborn baby to nicotine and increases the risk of potentially harmful effects to the unborn baby

- however, using NRT to stop smoking is far safer than smoking cigarettes while pregnant
- the difference between vaping and NRT is that any vaping also exposes the unborn baby to vapour and the potentially harmful substances it contains, which is absent from NRT
- one large trial of pregnant people found that nicotine vapes were more effective in stopping smoking and equally safe, compared to NRT using nicotine patches (Hajek et al 2022)
- however, overall, there is not enough evidence on the efficacy of vaping in pregnancy to support smoking abstinence and on the safety of vaping on pregnancy outcomes and the development of the baby in the womb
- therefore, vaping should only be considered in pregnant people unable or unwilling to use NRT to stop smoking according to best practice guidelines
- vaping in pregnancy is the last option to stop smoking to avoid exposure of the unborn baby to harmful substances in tobacco smoke which are absent from vapour, such as carbon monoxide
- when vaping in pregnancy for smoking cessation, the goals are to minimise the amount and duration of nicotine used and vapour inhaled to achieve this smoking abstinence.

After giving birth, there are further considerations:

- mothers who smoke and/or vape should continue breastfeeding for its protective effects for mum and baby (Bar-Zeev et al 2023)
- depending on the concentration of nicotine in the pregnant person's bloodstream, nicotine may cross into breast milk. The following factors will all influence the nicotine concentration in the person's bloodstream: the amount of nicotine exposure, the interval between nicotine exposure and breastfeeding, and the frequency of breastfeeding (Ministry of Health 2021a)
- to reduce the amount of nicotine absorbed by the baby, always vape nicotine after breastfeeding, not before (Bar-Zeev et al 2023).

Stopping vaping

Strongly advise non-smoking pregnant people not to vape. See page 70 for evidence on the health effects of vaping in pregnancy.

Cessation Support

Stopping vaping

Using vaping to stop smoking

- People who are pregnant or breastfeeding and who smoke cigarettes should be offered nicotine vaping as a second-line treatment to stop smoking after trialling NRT by best practice guidelines.
- People who are pregnant or breastfeeding and who vape exclusively can be offered behavioural therapies to stop vaping.

Explore reasons for stopping smoking or vaping during pregnancy.

Explore the client's reasons for stopping smoking or vaping (Bar-Zeev et al 2023):

> *'What are your personal reasons for wanting to stop smoking or vaping?'*
>
> *'What are your personal reasons for **not** wanting to stop smoking or vaping?'*

Strengthen the client's reasons for wanting to stop by asking them to elaborate on their thoughts (e.g., 'Please tell me a bit more about…'). Focus on these reasons instead of contradicting or judging the client's reasons for not stopping.

Plan behavioural change techniques to stop smoking or vaping during pregnancy.

The metabolism of nicotine is 60 percent higher in pregnancy (Dempsey et al 2002). Pregnant people may find that they need to smoke or vape more frequently or at higher than usual nicotine concentrations, compared to their smoking or vaping before pregnancy.

Consider the increased nicotine metabolism during pregnancy in behavioural strategies to stop smoking or vaping. For example, advise clients who are pregnant so that they may adjust their expectations and plans on how to reduce and stop smoking or vaping, if necessary.

Support from the partner and family of the pregnant or breastfeeding person is crucial to the success of the smoking or vaping quit attempt (Gould et al 2014). Encourage partners and families to attend consultations with the client or separately to discuss their own smoking or vaping and how to support the client (Gould et al 2014). Strategies may include (Bar-Zeev et al 2023):

- maintaining a smokefree and vape free home and vehicle at all times, even in the client's absence
- distracting the client when they experience cravings or feel stressed instead of offering a smoke or vape

- understanding and accepting that the client may experience withdrawal symptoms, which include feeling more irritable and anxious in the first few weeks after stopping smoking or vaping
- providing positive support even when the client relapses
- congratulating and rewarding the client for every smokefree or vape free day achieved.

Follow-up of smoking and vaping cessation in pregnant people may involve (Bar-Zeev et al 2023; Gould et al 2014):

- arranging the first follow-up after the initial visit in a few days to a week
- weekly consults until the quit attempt is going smoothly
- fortnightly visits once the quit attempt is stable
- offering post-partum follow-up.

Encourage your client to return for follow-up visits regardless of the outcome of the quit attempt and give positive feedback.

Plan behavioural change techniques to prevent postnatal smoking or vaping relapse.

- There is little evidence on the prevention of postnatal smoking or vaping relapse. It is common for clients who stopped smoking during pregnancy to go back to smoking in the postnatal period (Ministry of Health 2021b). Clients who stopped vaping during pregnancy may also go back to vaping after giving birth. The highest risk of relapse occurs immediately after giving birth and when finishing breastfeeding (Bar-Zeev et al 2023). Some clients may not intend to stay abstinent after giving birth (Gould et al 2014).
- A pragmatic approach raises awareness of relapse risk. Discuss the benefits of remaining smokefree and vape free, and encourage planning for a smokefree and vape free postnatal period (Bar-Zeev et al 2023).
- Encourage your client to reflect on the benefits of remaining smokefree and vape free as visits progress and before they give birth (Bar-Zeev et al 2023; Gould et al 2014). Clients who stop smoking for themselves and not only their baby may have a higher intention to remain smokefree in the postnatal period (Gould et al 2014), which may also apply to pregnant clients who vape.
- Remind clients to avoid even one puff of a cigarette or vape (Bar-Zeev et al 2023). At the same time, relapse is not a failure – relapse occurs commonly and is the norm (Bar-Zeev et al 2023). Encourage clients to try again.
- For people who have stopped smoking and/or vaping, health care providers should regularly screen for relapse.

Children, adolescents, and young people

Ask

Stopping vaping

- Discussions about vaping should begin at 12 years (or earlier if appropriate), based on prevalence data in North American students from Grade 9 and above (Chadi et al 2021).
- It is important to screen for vaping in all young people. Young people who begin vaping tend to continue into early adulthood, along with other substance use (Livingston et al 2022). The possible health consequences of vaping are more severe and far-reaching when vaping begins in adolescence than when initiated in adulthood (Livingston et al 2022).
- Before asking about vaping status, explain the benefits and limits of keeping the information disclosed by young people confidential (Chadi 2021; Chadi et al 2021).
- Children, adolescents, and young people who vape may be reluctant to disclose their vaping status. Adopting a non-judgemental approach, familiarity with vernacular vaping terms, and asking parents or guardians to step away during history-taking may help to break down barriers (Jonas 2022).
- Asking about peer and family vaping at home, including parents and guardians, may help to identify quitting barriers to address (Becker and Rice 2022).
- Young people who are under the minimum legal age to purchase vapes may access them in multiple ways, including through sharing vapes with others, purchasing through networks in schools and on social media, and proxies such as older relatives and people they know (Frost et al 2024).

Brief advice

Stopping vaping

- Strongly advise children, adolescents, and young people not to vape.
- Brief advice on stopping vaping from a health professional is important to young people. Young adults aged 18–30 years perceive education from health experts as more credible than other sources such as friends or social media influencers (Lee et al 2024).
- Conversations with young people should empower and help them come to their own conclusions while making them feel respected, listened to, and in control. Asking for

permission before giving advice and avoiding scare tactics align with such an approach (Hadland and Chadi 2020).

- When working with young people who vape or are at risk of taking up vaping, the conversation and advice will depend on their relationship with vaping.
- For young people experimenting regularly or occasionally and who think they have vaping under control and will not get addicted, advise them there is no safe way to vape. If your client expresses the belief that they can stop vaping at any time but only choose not to stop, encourage them to try stopping for a limited period. If the abstinence challenge proves difficult, this may prompt your client to reassess their vaping (Hadland and Chadi 2020).
- For young people who think they are addicted, want help to stop, and may have tried to stop but failed, advise them that it may take multiple attempts to stop for good. Explore what they did to try to cut down or stop, what made it hard, and what might make it easier. Each attempt is a new chance to figure out strategies that work, and each attempt takes your client closer to stopping for good.
- When working with adults who vape to stop smoking and who are concerned about young people vaping, encourage them to communicate openly with young people about their reasons for vaping.
- Discuss the health effects of vaping while also personalising messages to the young person's motivations and goals. While knowledge of the health effects of vaping can motivate young people not to vape or stop vaping (Crane et al 2023), health advice alone may not be effective. According to a US study, warnings about the potential effects of vaping on youth brain development did not influence vaping beliefs or willingness to vape among young people (Niederdeppe et al 2024). More research on targeted and tailored messages for preventing and especially stopping vaping in young people is needed (Wu et al 2024).

Cessation support

Using vaping to stop smoking

There is no evidence that vaping is an effective smoking cessation strategy in young people (Chadi et al 2021). **Do not recommend vaping for smoking cessation in young people aged under 18 years.**

Stopping vaping

Explore reasons for stopping vaping in young people.

- In addition to dependence or addiction, consider other reasons behind youth vaping and barriers to cessation, such as the discreet and highly social nature of vaping (Crane et al 2023; Sanchez et al 2021). Young people, particularly those who vape less regularly, often vape to be popular and fit in. Doing tricks and trying e-liquid flavours are other reasons to vape. Another common reason to vape is to manage negative emotions, such as reducing boredom and stress, and to feel good (or “get a buzz”).
- When exploring the good and bad things about vaping, consider the effects in the following areas: relationships with family and friends, the financial cost of vaping, hobbies, sports, and problems at school, such as difficulty concentrating, poorer academic performance, and missing days of school. Discuss the potential long-term effects of vaping, including impacts on health, addiction, and future educational aspirations and life goals (Crane et al 2023; Hadland and Chadi 2020; Tran et al 2024).

Plan behavioural change techniques to stop vaping in young people.

- The evidence on the long-term efficacy of NRT and non-NRT medications in adolescent vaping cessation is insufficient and emerging (Adams et al 2021).
- Use behavioural strategies alone to provide stop-vaping support to young people. Set an abrupt quit date or plan a gradual nicotine taper and accompany either method with close follow-up (see pages 18 to 26).
- If the young person has yet to develop the readiness or motivation to stop vaping, continue to explore motivations at scheduled follow-up sessions to support change (Hadland and Chadi 2020).
- Other behavioural vaping cessation strategies include individual or group counselling, mindfulness approaches, phone and text quit lines, smartphone apps, and distraction techniques. Alternative activities, such as sports, are helpful if they do not involve spending time with peers who vape. Individualise treatment plans as young people may be open to receiving several of these supports, and ensure your client is aware of how to access stop-vaping resources.
- The convenience, accessibility, and discreetness of vaping mean that it is easy for young people to vape anywhere and anytime, which may lead to high vape use and a lack of self-awareness of vaping behaviours (Sanchez et al 2021). Encourage young people to keep a vaping diary or log: keep track of the nicotine concentration, type of vape, flavour of e-liquid, and the quantity or frequency of vape use (e.g., the number of pods used per week) (Becker and Rice 2022; Sanchez et al 2021).
- Integrating family or trusted adults into the plan may help support young people in following the behavioural interventions and give positive reinforcement for change (Hadland and Chadi 2020).

- Changes in the social environment may facilitate vaping cessation, such as having a different non- vaping peer group, but this may not be appropriate or possible for all clients (Tran et al 2024).
- Tūturu is a whole-school approach to alcohol and other drugs developed by schools and health services and led by the New Zealand Drug Foundation (Tūturu 2024). Tūturu promotes a wellbeing-focused school environment, offering targeted and proactive support and encouraging students to reflect on their decisions and next steps about vaping without judgement (Boyd and Overbye 2020; Tūturu 2024).

Mental health service users

Ask

Stopping vaping

Using vaping to stop smoking

When assessing the risk of taking up smoking, consider the potentially higher risk of relapse to or uptake of smoking in ex-smokers or never-smokers who experience higher rates of mental and emotional distress.

Brief advice

Stopping vaping

- Advise clients that there is currently no evidence on the effects of vaping on **adult** mental health conditions, insufficient evidence on the effects of vaping on adult mental health symptoms, and insufficient evidence on the effects of vaping on sleep in adults (e.g., insomnia and the length of time it takes to fall asleep) (Banks et al 2023; Vanderkam et al 2023).
- Existing studies show there may be a connection between vaping and mental health problems (e.g., depression, anxiety, and impulsivity) in **adolescents and young adults** (Becker et al 2021; Khan et al 2023; Livingston et al 2022). However, the types of evidence from these studies cannot claim that vaping causes mental health problems in this group.

Cessation

Stopping vaping

Using vaping to stop smoking

- People with mental illness and substance use may require long-term support due to a higher risk of relapse in this group. This may include frequent clinic visits to monitor medication use.
- Including peer support and advice from people with lived experience of stopping vaping or smoking may increase adherence to treatment plans (The Centre for Addiction and Mental Health 2022).

Using vaping to stop smoking

- Vaping has benefits in both stopping smoking and reducing harm in people with mental illness who smoke, including people who are not motivated to stop or have been unable to stop previously. Easier-to-use devices, such as pod-based devices, may be more effective for people with mental illness to stop smoking (Royal College of Physicians 2024).
- For mental health service users who are using vaping to stop smoking, any change to the amount of tobacco smoked leads to changes in drug metabolism and the potential for adverse drug effects in some psychiatric medications. Stopping or changing the amount of tobacco smoked may necessitate changes to psychiatric medication dosing under medical supervision. Refer to the section ‘Medical practitioners in primary care and inpatient settings’ (page 51).

Cessation support by health professionals

Use this section:

- to complement the ABC pathway for vaping cessation, according to your health care worker role ('C' – Cessation)
- for clarification on pharmacological support for stopping vaping.

Nicotine replacement therapy and other medications

Nicotine replacement therapy and other non-NRT medications, such as varenicline and bupropion, are not approved for vaping cessation. There is currently insufficient evidence for the use of NRT and non-NRT medications for vaping cessation (Kundu et al 2023), and Medsafe has not endorsed either for vaping cessation in New Zealand.

Authorised prescribers, who are registered practitioners such as medical doctors and dentists, may legally prescribe medications under off-label use provisions for vaping cessation. Section 25 of the Medicines Act permits off-label prescribing when an authorised practitioner prescribes a treatment for a condition it is not approved to treat (BPAC 2021). However, Smokefree Service providers in New Zealand are not prescribers and cannot issue nor recommend NRT for the off-label indication of vaping cessation. Currently, they can only provide behavioural strategies for vaping cessation support.

Smokefree Service providers

Nicotine replacement therapy

If a client mentions using NRT as part of their wider stop-vaping programme:

- tell your clients that you are not able to issue NRT for vaping cessation:

  'Currently, NRT is not approved for vaping cessation by New Zealand's medicines safety authority, Medsafe, because there is not enough evidence to support using NRT to stop vaping. I cannot issue you NRT to take home as a stop-vaping medication. As more research is done, NRT may be approved to stop vaping in New Zealand in the future. In the meantime, I can support you to stop vaping using other helpful strategies.'

- explain that authorised prescribers such as doctors and dentists can prescribe NRT to stop vaping on an off-label basis, which means they are prescribing it for a purpose that is outside the approved uses of NRT.

Alternatively, if a client wishes, they can purchase NRT from places such as supermarkets and pharmacies over the counter for the normal retail price.

Non-nicotine replacement therapy medications

If a client mentions using non-NRT medications as part of their wider stop-vaping programme, tell your clients:

> *'Currently, non-NRT medications are not approved for vaping cessation by New Zealand's medicines safety authority, Medsafe, because there is not enough evidence to support using non-NRT medications to stop vaping. As more research is done, non-NRT medications may be approved to stop vaping in New Zealand in the future. In the meantime, I can support you to stop vaping using other helpful strategies.'*

Medical practitioners in primary care and inpatient settings

Nicotine replacement therapy

Medical practitioners should advise patients that medication options are based on tobacco cessation treatment approaches and that NRT or other medications for vaping cessation are considered off-label indications. It may be helpful to liaise with the patient's Smokefree Service provider if there is cause to consider medications for vaping cessation. If the patient has not seen a Smokefree Service provider for vaping cessation support, consider making a referral.

Adjusting medication dosing when tobacco smoking changes

Any change to the amount of tobacco smoked leads to changes in drug metabolism and the potential for adverse drug effects (NSW Ministry of Health 2019). The components of tobacco smoke, not nicotine, cause the drug metabolism changes. Neither the use of NRT nor the use of nicotine vapes affects drug metabolism. It is when people who smoke begin stopping or changing the amount of tobacco smoked that the resulting changes to drug metabolism may necessitate changes to medication dosing under medical supervision[3].

Take a vaping history in all patients

Medical practitioners in primary care and inpatient settings should ask for and record the vaping status of all patients, along with their smoking status.

Incorporate questions about vaping when evaluating patients, including young people, who present with respiratory symptoms or distress (Brown and Balk 2020).

[3] A complete list of drug interactions can be found here: www.health.nsw.gov.au/tobacco/Pages/drug-smoking-cessation.aspx

Dental and oral health practitioners

Nicotine replacement therapy

Authorised prescribers include registered dentists. Advise patients that medication options are based on tobacco cessation treatment approaches and that NRT or other medications for vaping cessation are considered off-label indications. Refer to your scope of practice and the approved list of prescription medicines relevant to your practice to find out what you can prescribe under off-label use provisions for vaping cessation. It may be helpful to liaise with the patient's Smokefree Service provider if there is cause to consider medications for vaping cessation. If the patient has not seen a Smokefree Service provider for vaping cessation support, consider making a referral.

Take a vaping history in all patients

Dental and oral health practitioners should ask about and record the vaping status of all patients, irrespective of whether there has been training on providing vaping cessation (Z. Ahmed et al 2018; Sundstrom et al 2023). Vaping status can be documented as part of routine oral history screening in the same way as asking about tobacco and alcohol use, to enable management of any oral health effects associated with vaping (Irusa et al 2022).

Nursing, allied, and other health workers

Nicotine replacement therapy

Refer to your scope of practice and the approved list of prescription medicines relevant to your role to determine whether you can prescribe medications under off-label use provisions for vaping cessation. Authorised prescribers have independent prescribing rights within their scope of practice and include nurse practitioners, optometrists, dentists, and registered midwives (Key and Hoare 2020; Medsafe 2020). Designated prescribers may only prescribe from a list of medicines published by the Director-General of Health under section 105(5A) of the Medicines Act and are expected to prescribe collaboratively alongside an authorised prescriber. Designated prescribers include pharmacist, dietitian, and registered nurse prescribers (Key and Hoare 2020).

It may be helpful to liaise with the patient's Smokefree Service provider if there is cause to consider medications for vaping cessation. If the patient has not seen a Smokefree Service provider for vaping cessation support, consider making a referral.

Harms of vaping compared to smoking

Use this section:

- when giving clear and personalised advice about vaping and vaping cessation ('B' – Brief Advice)
- to discuss the harms of vaping relative to smoking and how the relative harms change depending on your client's smoking status
- to inform clients who smoke of the potential benefits and risks of using vaping to stop smoking.

Children, adolescents, young people, people who do not smoke, and pregnant people who do not smoke should be strongly advised not to vape, due to the risks of health harm and of developing nicotine dependence when using nicotine-containing vapes.

For people who smoke, vaping is much less harmful than smoking – but it is not harmless.

- Inhaling tobacco smoke causes cancer and other smoking-related illnesses. Up to two in three smokers will die from smoking unless they stop (Banks et al 2015). Any amount of tobacco smoking is harmful, so the sooner people can stop smoking tobacco, the better.
- The current weight of evidence suggests that vaping (with or without nicotine) is less harmful than tobacco smoking.
- Nicotine in any form of delivery can be addictive, but it does not cause cancer. The liquid in most vapes contains nicotine. When people inhale the vape aerosol, nicotine is delivered with it and absorbed rapidly into the bloodstream, then to the brain.
- Smoking delivers nicotine in a more harmful way compared to vaping because smoking involves burning tobacco while vaping does not. Burning tobacco creates cancer-causing substances.
- There are more than 8,000 chemicals in tobacco smoke, many of which are harmful products arising from burning tobacco (Lampos et al 2019). Fewer than 100 chemicals are detectable in e- liquid vapour (Mendelsohn et al 2022). Most of the chemicals in e-liquid vapour are in far lower concentrations than those in tobacco smoke (Mendelsohn et al 2022).
- Many chemicals in vaping e-liquids, such as flavours, are considered safe for eating and drinking. However, the full extent of the long-term health effects of *inhaling* these

substances after they have been heated to high temperatures by a vaping device, and have interacted with each other under these conditions, is not known (National Academies of Sciences, Engineering, and Medicine 2018).

The best end goal is to stop smoking **and** vaping and to be smokefree and vape free.

Vaping helps people stop smoking, but the risk of relapse back to smoking needs to be managed.

- For people who smoke tobacco, vaping can be an effective aid to help stop smoking (Lindson et al 2024).
- There is a risk of relapse back to smoking for people who have stopped smoking using vapes.
- People who have switched to vaping from smoking and had repeat relapses back to smoking or have low confidence in remaining smokefree without their vape should be encouraged to try to reduce their vape use to the lowest level of aerosol exposure that prevents them from relapsing to tobacco smoking. People in this situation should have a follow-up meeting or call arranged to review their vape use and see if they are ready to cut down further or stop completely.
- If relapse back to smoking is not so much of a concern, then clients should be advised to stop vaping as soon as possible, due to the potential risk of health harm, and if using nicotine- containing vapes, the risk of maintaining dependence.

Dual use of vapes and cigarettes is as harmful as smoking.

- Dual use (using both vapes and combustible cigarettes interchangeably) is as harmful as smoking. It is concerning if the transition from smoking cigarettes to exclusive vaping does not occur or if there is not a significant reduction in the consumption of combustible cigarettes (Pisinger and Rasmussen 2022).
- Dual use should only be a temporary stepping stone to stopping smoking completely as soon as possible. People who dual use should stop smoking tobacco completely and use nicotine vaping to stop, if at all possible.

Nicotine dependence and addiction

Use this section:

- when discussing behavioural strategies for vaping cessation and vaping to stop smoking ('C' - Cessation Support)
- to explain dependence, addiction, and associated concepts as they relate to cigarette smoking and nicotine vaping
- when planning how to manage cravings and withdrawal symptoms as barriers to stopping cigarette smoking and nicotine vaping.

Nicotine is a naturally occurring component of the nightshade family found in tobacco plant leaves. Nicotine is contained in many vaping devices and may be present even if it is not stated on the label.

Dependence refers to the physiological adaptations occurring in response to the repeated use of medications and substances, even after little use. As a result, people may experience withdrawal symptoms when stopping the substance abruptly. Dependence may occur with nicotine. Dependence is not the same as addiction. Dependence can occur without addiction, including when using nicotine- containing substances.

Addiction refers to feeling a strong need to use a substance. People may continue to use the substance despite being aware of its potential harmful effects and may feel a loss of control over its use. They may also feel withdrawal symptoms when abruptly stopping a substance. Addiction may occur with nicotine. Addiction is not the same as dependence. Addiction can occur without dependence, including when using nicotine-containing substances.

Nicotine vaping can lead to dependence in never-smokers and people who used to smoke. Risk factors for nicotine vaping dependence include genetics (Cooper and Henderson 2020), vaping at an early age, having family and friends who are accepting of vaping, using other substances such as cigarettes and cannabis (Vogel et al 2018), and co-existing mental health problems (Gorfinkel et al 2022). Different vape flavours, such as menthol and fruit, may strengthen nicotine dependence in adolescents as they are pleasant and mask the harshness and bitterness of higher nicotine concentrations (Cooper and Henderson 2020; Gades et al 2022).

Cravings refer to a powerful desire or urge to smoke a cigarette or to vape when a person tries to stop smoking tobacco or vaping or has stopped completely. Cravings can occur without warning. The trigger may be seeing someone else smoking or vaping, smelling smoke or vapour, or walking past a store that sells these products. Cravings can occur for months and years after withdrawal symptoms disappear. However, these urges to smoke or vape become less intense and frequent over time. People can reduce the risk of cravings by planning to avoid being in situations where triggers are likely. Refer to page 24 for ways to deal with cravings.

Withdrawal symptoms are unpleasant and sometimes severe feelings related to stopping nicotine use that can lead people to start smoking cigarettes or vaping nicotine again to make them go away. These feelings may include feeling irritable, anxious, and restless,

having a depressed mood, disturbed sleep, and difficulty concentrating. These unpleasant feelings are a normal response to the lack of nicotine that people were used to getting. In tobacco smoking cessation, withdrawal symptoms are strongest in the first week after stopping, when the risk for relapse is highest, and most symptoms will disappear within four weeks of stopping smoking. These timeframes may differ with vaping, but it is helpful for people to learn about the withdrawal symptoms to expect when they try to stop smoking or vaping and to plan how to manage them to stop smoking or vaping.

Relapse occurs when people start smoking or vaping again after trying to make a serious attempt to stop (longer than 24 hours).

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Appendix 1: Health effects of vaping: Brief evidence summary

Use this section:

- when giving advice about vaping and stopping vaping ('B' – Brief Advice)
- to inform people of the benefits of stopping vaping
- to help people weigh all the health effects of vaping rather than considering them in isolation
- to relate the health effects to your client's circumstances (for example, a current health condition such as asthma).

Respiratory health

Avoid long-term vaping to reduce exposure to chemicals that could damage the airways and lungs and minimise potential respiratory symptoms and dysfunction.

For people who smoke, there is insufficient evidence that changing to vaping will improve lung function, the course of lung disease (e.g., asthma and COPD), or related symptoms (Banks et al 2023; National Academies of Sciences, Engineering, and Medicine 2018). Harm occurs if vaping prevents stopping smoking and instead prolongs smoking through dual vaping and smoking (National Academies of Sciences, Engineering, and Medicine 2018).

There is some evidence on the effects of vaping on increased self-reported respiratory symptoms, including asthma symptoms, in vapers compared to non-vapers (Project VECTOR 2024; Yayan et al 2024). There is also some evidence that vaping increased these respiratory symptoms, including asthma, in dual users compared to never-smokers who vape (Karey et al 2024).

There is insufficient evidence from lung function tests, lung imaging studies, and bronchoscopy on the effects of any duration of vaping on lung function (McNeill et al 2022).

E-cigarette or Vaping Use Associated Lung Injury (EVALI, also known as VALI, vaping-associated lung injury) is associated with vitamin E acetate, an additive found in some cannabis e-liquids (M. M. Baker et al 2022). Vitamin E acetate is generally not found in regular nicotine e-liquids (M. M. Baker et al 2022; Project VECTOR 2024).

Bronchiolitis obliterans is a disease of airway narrowing and scarring. It is popularly called "popcorn lung" as it was first described in popcorn factory workers exposed to diacetyl, a buttery-flavoured agent (BPAC 2018). Popcorn lung was a possible concern because some e-liquids contained diacetyl as a flavour. However, many countries have now banned diacetyl as a vape flavour, and there is no direct evidence of harm from vaping e-liquids that contain diacetyl (BPAC 2018). People who smoke have far greater exposure to diacetyl than from vaping or occupational exposures, without evidence of popcorn lung (Pierce et al 2014).

There is insufficient evidence on the effects of second-hand vaping on lung function (McNeill et al 2022).

Cardiovascular health

Avoid vaping to avoid exposure to adverse cardiovascular system effects.

The use of nicotine vapes increases heart rate and blood pressure immediately after vaping, in the same way as after smoking a cigarette or using NRT (Asfar et al 2022; McNeill et al 2022; National Academies of Sciences, Engineering, and Medicine 2018; Project VECTOR 2024).

Some studies of people who have smoked and of people who have vaped showed that nicotine and nicotine-free vaping can lead to short-term changes in blood vessels, as seen in smoking (Asfar et al 2022; Banks et al 2023; Lyytinen et al 2023; Project VECTOR 2024). These changes included dysfunction of the blood vessel lining and stiffness of the arteries.

However, there is insufficient evidence on the effect of long-term nicotine vaping on long-term changes (over more than three months) in heart rate, blood pressure, and cardiac function (McNeill et al 2022; National Academies of Sciences, Engineering, and Medicine 2018).

There is no evidence of the effect of nicotine vaping on cardiovascular diseases, such as heart attacks, strokes, and cardiac death (Banks et al 2023).

Use the following points when discussing nicotine vaping to stop smoking in people who have had a previous cardiovascular event.

- In smoking, the chemicals created from burning tobacco, such as carbon monoxide (CO), reduce oxygen in the blood or may damage the heart. CO is not present in vape aerosol.
- Vaping as a substitute for smoking tobacco will likely reduce the potential for cardiovascular harm posed by continued smoking because CO and other chemicals are absent.
- Nicotine vaping is associated with short-term increases in heart rate and blood pressure, and both nicotine and nicotine-free vaping are associated with blood vessel changes.
- Be cautious when considering using vapes to reduce or stop smoking if there has been a recent acute serious heart or blood vessel-related event, such as a heart attack or a stroke (Project VECTOR 2024).
- Consider vaping in people unable or unwilling to use NRT or non-NRT medications (such as bupropion, also known as Zyban) to stop smoking according to best practice guidelines.

Cancer

There is currently no evidence to suggest that nicotine vaping causes cancer (Asfar et al 2022; Banks et al 2023; McNeill et al 2022; National Academies of Sciences, Engineering, and Medicine 2018; Project VECTOR 2024).

There is evidence that there may be exposure to cancer-causing chemicals in people who vape but at a significantly reduced level compared to smoking cigarettes (National Academies of Sciences, Engineering, and Medicine 2018; Project VECTOR 2024).

Oral and dental health, and ear, nose, and throat (ENT) health

The commonest oral effects of vaping are mouth or throat irritation (Project VECTOR 2024).

Some, but insufficient, evidence suggests vaping may lead to gum disease, bone loss around teeth, and other problems in the tissue surrounding teeth (the periodontium) in people who exclusively vape or who both vape and smoke cigarettes, and who are never or former smokers (Asfar et al 2022; Banks et al 2023; Project VECTOR 2024). There is some early-stage evidence that vaping impairs oral wound healing (Majid 2024; Robles 2023).

The evidence is mixed, but insufficient, on whether changing from smoking to vaping improves oral and dental health (Banks et al 2023; McNeill et al 2022; National Academies of Sciences, Engineering, and Medicine 2018).

Laboratory studies found vape aerosols toxic to cells from the ear, nose, and throat (Asfar et al 2022). However, the evidence on a link between nicotine vaping and ENT disease outcomes is insufficient (Asfar et al 2022).

Pregnancy

There is insufficient evidence in human studies on the effects of maternal vaping on pregnancy outcomes, including birthweight (Asfar et al 2022; Banks et al 2023; Calder et al 2021; McNeill et al 2022; National Academies of Sciences, Engineering, and Medicine 2018; Project VECTOR 2024).

There is insufficient evidence on the effects of maternal vaping on human fetal development (National Academies of Sciences, Engineering, and Medicine 2018). According to animal studies, exposing the fetus to nicotine from vapes and/or vape aerosol may have adverse effects on the unborn baby's developing brain, heart and lungs, cognition, kidneys, and birthweights (Project VECTOR 2024).

There is insufficient evidence in human studies on the effects of maternal vaping on reproductive health outcomes (Banks et al 2023; McNeill et al 2022).

Young people

Children, adolescents, young people, and people who do not smoke should not vape due to the potential risks of health harm and dependence.

There is moderate evidence for increased asthma attacks and increased lung symptoms, such as cough and wheeze, in adolescents who vape (Jonas 2022; Livingston et al 2022; Mukerjee R. et al 2024; National Academies of Sciences, Engineering, and Medicine 2018).

The brain does not complete development until a person is in their mid-20s, and sustained nicotine exposure before this age, from in the womb to adolescence, could potentially impact brain development (Rough et al 2024). In adolescence, nicotine may affect learning and behaviour (Lyzwinski et al 2022).

There may be a connection between vaping and mental health problems (e.g., depression, anxiety, and impulsivity) in adolescents and young adults (Becker et al 2021; Khan et al 2023; Livingston et al 2022). However, the types of evidence from these studies do not support a causal association between vaping and mental health problems in adolescents and young adults.

Health and safety

Intentional or unintentional exposure to and poisoning from e-liquids (via eating, drinking, and contact with the eyes or skin) can harm multiple organs and even be fatal (Banks et al 2023; National Academies of Sciences, Engineering, and Medicine 2018). The commonest route of poisoning is through accidental oral ingestion, with fewer instances of poisoning via contact with the eyes (Fowles 2021; McNeill et al 2022).

Vapes contain batteries that may rarely explode or catch fire, causing burns and projectile injuries (Banks et al 2023; National Academies of Sciences, Engineering, and Medicine 2018). Batteries that are of poor quality, improperly stored, or modified significantly increase the risk of vape devices causing these burns and injuries (National Academies of Sciences, Engineering, and Medicine 2018).

The risks of e-liquid poisoning and fire due to vaping devices are comparable to similar household substances and electrical goods (Rough et al 2024).

There is evidence that vaping e-liquids increases the risk of exposure to substances that are potentially toxic to brain and organ development, including metals such as cadmium, lead, and uranium (Kochvar et al 2024). More frequent vaping is linked with increased exposure to these toxic substances (Kochvar et al 2024). These metals are also present in the environment, and people may be exposed to them through industrial activity and their diet.

Second-hand exposure to vaping aerosols differs from second-hand exposure to cigarette smoke.

- Vaping can increase airborne particulate matter in indoor environments (Banks et al 2023).
- However, second-hand vapour contains a small fraction of the toxic substances in tobacco. Vaping also does not contain tobacco nor involve the burning of tobacco. In contrast, cigarette smoke contains a mixture of over 8,000 chemicals. Many of these chemicals are harmful products from burning tobacco (Lampos et al 2019).
- When someone vapes, only the vapour exhaled by the person enters the surrounding air (Martuzevicius et al 2019). This vapour dissipates quickly. On the other hand, the majority of the harmful emissions that smoking generates are “side stream” or generated in between cigarette puffs (Martuzevicius et al 2019).
- The nicotine from exhaled vapour can be deposited on surfaces but at very low levels that are unlikely to cause harm (Banks et al 2023). However, it is important to note that vaping in the following areas is prohibited under the law: indoor workplace areas, certain public enclosed areas, and motor vehicles carrying children, adolescents, and young people under the age of 18 years.
- Therefore, the risks to health from second-hand exposure to vapour and deposited nicotine are likely to be very low.

Appendix 2: Using vaping devices

Use this section:

- when discussing behavioural strategies for vaping to stop smoking ('C' - Cessation Support)
- to discuss how to use vaping devices in a way that minimises the risk of misuse.

Under the Smokefree Environments and Regulated Products (Vaping) Amendment Act 2020, it is illegal to:

- sell or supply vaping products to someone aged under 18 years
- vape anywhere it is illegal to smoke, including indoor workplace areas and certain public enclosed areas
- vape in motor vehicles carrying young people under the age of 18 years.

Avoid nicotine poisoning.

- Advise people to safely store e-liquid to prevent accidental exposure in children and pets.
- When topping up refillable vapes, avoid contact between the e-liquid and skin, and use gloves to clean up spills immediately after they occur.

Follow instructions for use specific to your device.

- Do not modify the vaping device or the e-liquid, for instance, by adding THC (tetrahydrocannabinol, the psychoactive component of cannabis), vitamin E acetate, or other oils.
- It is unsafe to refill or recharge a disposable vape. Internal parts wear out in disposable vapes and can expose people to toxic chemicals, so they should not be reused.
- Tampering with batteries in disposable vapes can cause fires and burns. Some vapes have exploded.
- Use the correct charger for the device, and do not leave a vape unattended when charging.
- Only use e-liquids within their shelf life (usually two years from the date of manufacture). Store away from light and heat.

- Maintain reusable devices and replace parts regularly. For example, replace the coil regularly, as frequently as weekly, to properly vapourise the liquid. Poor maintenance increases the risk of heavy metal contamination.
- Avoid “dry puffing”, which occurs if the liquid is not vapourised properly or if using the vapes dry. The internal parts burn when the liquid runs out, releasing foul-tasting and harmful chemicals. Get a new vape or change worn-out components. Top up with refillable liquids if the vape is reusable.

Choose brands and retailers that have a good reputation.

- Do not purchase e-liquids, pods, or devices from unknown sources.
- Avoid unlabelled products and non-retail or social sources of vapes if the ingredients cannot be verified.

Safe disposal of vaping products.

- Dispose of batteries and disposable vapes safely.
- Improper disposal of vape battery waste can lead to toxic chemicals leaching into soil and waterways.

Avoid getting “nic sick”.

- People feel “nic sick” when exposed to too much nicotine.
- Symptoms include nausea, headaches, and dizziness. These effects go away within a few minutes of stopping vaping. Frequently ignoring these symptoms may lead your client to develop an increased tolerance to nicotine and to vape more.
- To avoid feeling “nic sick”, advise your client to start with one puff and allow time for the nicotine to take effect before the next inhale when trying a new flavour or brand of vape.
- Some young people get a buzz from “nic sick” symptoms. Frame the discussion around these symptoms as a way your client’s body is telling them that they have had too much nicotine.

Appendix 3: Evidence on interventions using vaping to stop smoking, and stopping vaping

Use this section for summary evidence on vaping to stop smoking and stop-vaping interventions

Stop-smoking support using vapes

- There is high certainty evidence that nicotine vaping increases the rates of stopping smoking compared to standard NRT, moderate certainty evidence for increasing stop-smoking rates compared to nicotine-free vaping, and low-certainty evidence for increasing stop-smoking rates compared to behavioural or no support (Lindson et al 2024).
- The evidence is unclear on whether gradual or abrupt smoking cessation is more effective when vaping to stop smoking. A small Australian pilot randomised controlled trial (n = 66) in adult users of alcohol and other drug services demonstrated no statistically significant difference in smoking cessation between gradual and abrupt stopping (Skelton et al 2022). On the other hand, US survey data (n = 857) found that people who vaped to stop smoking experienced longer durations of smoking abstinence when they abruptly switched to vaping from smoking and when they vaped more frequently during their stop-smoking attempt (Bold et al 2023).

Stop-vaping support

- There is a need for more methodologically rigorous testing of vaping cessation interventions that use an experimental or prospective design and include longer-term follow-up of intervention effects in representative samples (Amin et al 2023; Moxham-Hall 2022).
- The types of interventions used for stopping vaping reported in the literature include behavioural counselling (e.g., motivational interviewing and individual or group counselling), contingency management such as financial incentives for achieving abstinence, combined behavioural counselling and NRT, non-NRT medications, tapering vape use, mindfulness, text messaging programmes, and video game and smartphone apps (Chadi et al 2021; Kundu et al 2023; Moxham-Hall 2022).
- There are no studies on complete cessation of smoking and vaping in dual users (Kundu et al 2023).

Behavioural stop-vaping support

- Vapers may prefer a customisable quit plan, the option of tapering use then stopping vaping, and the support of friends (Kundu et al 2023).
- A pilot randomised controlled trial of 24 US college students demonstrated that a pharmacist-led gradual nicotine vape taper combined with behavioural support was a

more effective way of being vape free at six months, compared with behavioural support with NRT and compared with self- guided cessation (Sahr et al 2021).

- A gradual nicotine vape tapering programme involves alternating reductions in nicotine concentration with decreases in the time spent vaping and is coupled with behavioural counselling (Sahr et al 2020). The taper may increase client engagement by enabling them to work towards a quit date. Weigh this strategy up against the risk of ongoing exposure to vaping when considering whether to opt for a nicotine vape taper to stop vaping, as opposed to stopping abruptly or "cold turkey".
- A Cochrane review published in 2023 evaluated the effectiveness of interventions to prevent and cease vaping in children and adolescents aged 19 years or younger. The review did not identify any eligible studies (RCTs) with published data (Barnes et al 2023).
- Abrupt stopping, using willpower, delaying or limiting access to vapes, and replacing vaping with any other activity were the most frequent stop-vaping strategies used by students aged 18–24 years (Al-Hamdani et al 2023; Holt and Latimer 2024). Social support is deemed effective for vaping cessation by young people but is used less frequently. In younger students aged 11–19 years, unassisted cessation and peer support are the commonest stop-vaping strategies (Dai et al 2023; Jones et al 2023).

Pharmacological stop-vaping support

- Nicotine replacement therapy, varenicline, and bupropion are medications approved for use as smoking cessation aids in New Zealand. Cytisinicline (also known as cytisine, a plant-based alkaloid that reduces nicotine dependence and helps adults stop smoking) is not an approved medicine in New Zealand. The evidence on the use of these medications in vaping cessation is insufficient or emerging.
- A preliminary randomised controlled trial (n = 30) compared a 28-day course of combination NRT with behavioural therapy versus Quitline referral only in adults aged 18 and over who vaped nicotine daily for a year or more and who were interested in stopping vaping within the next month. 33.3 percent of the group treated with NRT and behavioural therapy reported not vaping for seven days prior to the end of treatment, compared to zero in the Quitline control group (p = 0.057) (Palmer et al 2023).
- Two small double-blinded randomised controlled trials demonstrated that varenicline led to higher quit rates in exclusive daily vapers compared to placebo or placebo plus counselling. However, both trials were limited in the number of people recruited (40 and 140 people) and had short follow-up times (12 weeks and six months) (Caponnetto et al 2023; Fucito et al 2024).
- There are currently no clinical trials or case reports on bupropion for vaping cessation (Huerne and Eisenberg 2023).
- A randomised controlled trial (n = 160) investigating a 12-week course of behavioural support and cytisinicline found that cytisinicline may also be helpful for adult nicotine vaping cessation (Rigotti et al 2024). A larger trial with longer follow-up is required to confirm these findings.

School-based stop-vaping interventions

- School-based vaping prevention interventions are limited (Lyzwinski et al 2022). “Catch my breath” is a US middle school intervention focusing on increasing knowledge of vaping-related health harms. There were statistically significant increases in vaping knowledge and decreases in vaping prevalence in schools with the programme compared to control schools (Lyzwinski et al 2022). More research is required on the effect of the programme on vaping attitudes and susceptibility (K. A. Baker et al 2022).
- An evaluation of n = 103,522 US students in Grades 5 to 12 receiving the Vaping: Know the Truth digital curriculum on vaping-associated health effects found that, on average, students answered more than three additional questions correctly out of 20 in the post-test than in the pre-test (Hair et al 2023). This evaluation did not involve a control group of students who did not receive the curriculum, so it is less robust in controlling for potential confounders and isolating the effect of the programme.

Technology-based stop-vaping interventions

- Mobile phone text messaging programmes can be effective in supporting people to stop smoking compared to minimal support (Whittaker et al 2019). These interventions may also be effective as stop-vaping tools (Lyzwinski et al 2022). Current text messaging interventions for stopping vaping provide educational content, foster self-efficacy, and help with resilience-building (Lyzwinski et al 2022).
- A randomised controlled trial of a tailored and interactive text message programme available in the US (“This is Quitting”) in adults aged 18–24 years (n = 2,588) was effective in promoting vaping cessation, compared to a control group that did not receive the programme (Graham et al 2021). “This is Quitting” is the only intervention that has undergone rigorous testing for vaping cessation, according to a scoping review (Kundu et al 2023) and a systematic review (Amin et al 2023), both published in 2023.
- A 2022 study assessing the quality of smartphone apps for vaping cessation found few apps for vaping cessation. Existing apps use similar approaches as apps for smoking cessation but with limited features explicitly tailored to stopping vaping (Sanchez et al 2022).

Evidence for parents and health workers helping young people to prevent and stop vaping

- Educating parents on conversations that help children understand vaping and increase their media literacy around advertisements promoting vaping may prevent adolescents from vaping. Analysis of US survey data of teenaged youth (n = 639) found that parenting practices that included restrictions on the time children spent on media and discussions on media were associated with greater adolescent perceptions of vaping harm and a lower likelihood of vaping (Jeong Choi et al 2022).
- Practical learning sessions on the management of adolescent vaping for paediatric clinicians may increase the following: clinician comfort in discussing vaping with patients, the provision of counselling, and the implementation of best-practice screening strategies (Oliver et al 2022).