Clinician's Guide to Supporting Adolescents and Young Adults Quit Vapes

Focusing on screening, assessment and pharmacotherapy using the 5As brief intervention framework.





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The purpose of this guide is to assist clinicians working with adolescents and young adults (AYA) to effectively address vaping and e-cigarette use with a specific focus on screening, assessment and pharmacotherapy using the 5As brief intervention framework. The term e-cigarettes or vapes will be used interchangeably within this document and is referring to the same product.

Introduction

Using e-cigarettes or vaping has become increasingly popular among young people in recent years. The 2021 NSW Population Health survey shows that 32.7 per cent of 16 to 24 year olds had ever used an e-cigarette/vape in 2020-2021 (up from 21.4 per cent in 2018-2019). Similarly, the proportion of 16 to 24 year olds who were current users of e-cigarettes/vapes increased from 4.5 percent to 11.1 per cent (1).

The prevalence of e-cigarettes use/vapes threatens decades of progress in tackling tobacco use with its high nicotine content, appealing colours, low costs, wide availability and discreet designs. There is mounting evidence that exposure to nicotine during adolescence and young adulthood is not only associated with increased rates of other substance use, but also that such exposure has long term effects on the developing brain (2).

Screening tools

Screening and assessment are critical to provide safe and effective care. Identifying substance use, its potential risks and impact on the AYA should form part of the assessment to reduce risk and provide interventions to promote good health and wellbeing (6).

Although there's no validated screening tools that explicitly ask AYA about use of e-cigarettes or other vaping products, there are well studied instruments that ask AYA about tobacco use. The following screening tools can be adapted to screen for e-cigarette/vape use for AYA:

The Screening to Brief Intervention (S2BI) asks the validated question, 'in the past year, how many times have you used tobacco?' (3, 10).

The Hooked On Nicotine Checklist (HONC) is a 10-item screening instrument to detect loss of autonomy or nicotine dependence (4, 9, 10).

The Time To First Cigarette (TTFC) of the day has been identified as the best single item indicator of nicotine dependence which has been extensively used in various clinical settings (5, 9).

5A Brief Intervention Framework

Brief interventions such as the 5As is commonly used to guide smoking cessation and can therefore be applied to AYA who use e-cigarettes or vape. Clinicians should routinely *ask* about e-cigarette/vape use, *assess* their level of use and readiness to change, *advise* AYA to quit e-cigarettes/vapes, *assist* AYA with quitting and *arrange* for ongoing follow-up (3, 7,10). The ASK, ADVISE and HELP tool is an alternate brief intervention tool, that is shorter than the 5As and may be appropriate depending on the clinical context.

Pharmacotherapy – Nicotine Replacement Therapy

Attempts to quit e-cigarettes/vapes can be hindered by cravings and withdrawals. Nicotine replacement therapy (NRTs) should be considered to assist AYA in achieving their goal of quitting and enhance cessation outcomes. NRTs has been recommended for adolescents aged <18 years seeking to quit smoking and therefore would be helpful for AYA who use e-cigarettes or vapes. Combination of long-acting patch (for maintenance nicotine delivery) as well as short-acting gum or lozenge (for breakthrough cravings) should be used for optimum treatment effectiveness (3, 9). Nicotine inhalators should be avoided as it as it imitates the act of e-cigarette use/vaping and addressing the physical aspect of dependency (hand to mouth) is crucial (3).

1. Ask – ask all young people about e-cigarette use/vapes

All clinicians should ask all the AYA whether they use e-cigarettes/vapes or any other tobacco products. This should prompt the clinician to ask further questions about e-cigarette use/vape, provide education about risks and provide support to quit e-cigarettes/vapes.

Ask – screen for e-cigarette use

'In the last month, how many times have you used e-cigarettes/vapes?'

If no, ask if they have ever used vapes:

Clinicians can use S2BI validated question to explicitly ask AYA about use of e-cigarettes and other vaping products

'Have you ever used e-cigarettes or tobacco products (cigarettes, shisha)?'

If AYA has not used e-cigarettes/vapes, affirm their choice not to vape

<u>If yes</u>, the following questions can be asked to determine vaping related behaviours

'When did you first use e-cigarettes/vapes?'
'Do you vape with or without added nicotine?'

Ask about type and brand/vaping device the AYA is currently using

Ask about the type or brand of e-cigarette/vape the young person uses including quantity (units/day & number of puffs) and nicotine percentage

'What **type** of e-cigarettes/vapes are you using?' 'Disposable, rechargeable or refillable'

'What **brand** of e-cigarettes/vapes are you using?'
Some of the products AYA report using include IGET, HQD, Gunnpods.
All come in various number of puffs and nicotine concentration

'Where do you get your e-cigarettes/vapes from?'
This will help us to understand what might be in your vaping liquid, such as nicotine, other toxins or chemicals.

Ask about tetrahydrocannabinol (THC) use, flavours, nicotine concentration and quantity used

'What flavours do you usually use?'

'Do you use THC in your vaping device?'

'What is the concentration of nicotine?'

'How often do you vape in the day?'

'How many puffs do you use per day?' or 'How long does your vape last?' Or 'How many vapes (units) do you go through in one week?'

Vaping nicotine and cannabis places AYA at risk of dual dependency. Vaping THC may be associated with E-cigarette or Vaping-Associated Lung Injury (EVALI). Higher concentration cartridges may be associated with greater risk (2).

Exposure to nicotine via e-cigarettes is difficult to quantify. Nicotine exposure may be significantly higher or lower than traditional cigarettes. Caution must be taken in estimating the dose of NRT.

2. Assess – assess nicotine dependence and readiness to change

Clinicians should assess for nicotine dependence and the AYA's readiness to change to tailor intervention to the AYA's readiness to quit.

The HONC used to assess loss of autonomy/dependency on tobacco can be modified to reflect ecigarette use, similarly the TTFC can be modified to Time To First Vape (TTFV) as a single item question to determine nicotine dependence.

Assess nicotine	Use the Modified Hooked On Nicotine Checklist (M-HONC) to assess	
dependence	nicotine dependency and loss of autonomy (Appendix 1)	
'		
	Use Time To First Vape - TTFV	
	Vaping within 30 minutes of waking, experiencing withdrawals and	
	cravings are markers of nicotine dependence	
	'How long after waking do you vape?' (TTFV)	
	Note: Attempts to quit vapes can be hindered by cravings and	
	withdrawals.	
	Assess for Cravings?	
	'Has there been a time when you had such strong urges to use e-cigarettes/vapes that you could not think of anything else?' 'Do you experience cravings?'	
	Assess for nicotine withdrawals	
	'Some people experience physical and psychological discomfort when they stop vaping. They report feelings such as irritability, frustration, anger, cravings, anxiety and depressed mood, have you ever experienced this when you stop vaping or if you were not able to source one for any reason?'	
	Nicotine withdrawal symptoms include:	
	Irritability, frustration, anger	
	Cravings	
	Anxiety Difficulty in concentration	
	Difficulty in concentration Increased appetite	
	Restlessness	
	Depressed mood	
	Insomnia	

'How do you feel about vaping?'

'Have you thought about quitting e-cigarettes/vapes?'

'Have you ever tried to quit vaping in the past?'

Assess readiness to

change

'On a scale from 1 to 10, how motivated are you to cut down or quit vaping?'

'On a scale from 1 to 10, how important is it for you to quit vapes?'

'On a scale from 1 to 10, how confident are you about quitting vapes?'

If AYA is not ready, engage in readiness counselling:

<u>Explore motivations to quit</u> – See ASSIST section

'What are some things that would be good about quitting?' or 'What are some things that would motivate you to quit?'

Explore barriers to quitting – see ASSIST section

'What's stopping you from quitting?'

'What are some of the barriers to quitting?'

3. Advise – advise all AYA who vape to quit

Clinicians are in a good position to advise AYA to quit e-cigarettes/vapes, this should be done routinely. Establishing rapport, developing trust and asking permission to advise about e-cigarettes/vapes and risks associated with use helps minimise risk of hindering the therapeutic relationship. Personalising the advice and benefits of quitting can further support the discussion around quitting e-cigarettes/vapes.

Clinicians are well suited to provide information and raise awareness around risk of nicotine poisoning

Calls to the NSW Poisons Information Centre for accidental vaping exposures in toddlers have increased. In 2021, children aged 1-4 years accounted for 48 per cent of calls related to vaping exposures. A threefold increase than number of calls made for this age group in 2020. Inhalation of ingestion of nicotine can result in poisoning or fatality. Some of the symptoms include nausea, vomiting, abdominal pain, palpitations, wheeze, agitation, seizures and shortness of breath (11). Education around keeping vapes and nicotine liquid out of reach of children is important.

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Advise adolescent and young person to quit	Provide brief, consistent and positive reminders to quit	
	Use messages that are clear, personalised, supportive and non-confrontational.	
	Be clear - 'One of the best thing you can do for your health is to quit vaping, I can help you with this'.	
	Personalised advice — 'I know you have been worried about your level of energy and feeling breathless when playing soccer. Quitting vapes will help you feel much better, improve your fitness and not become breathless when you play soccer'.	
	'I can support you and help you quit vapes'	
	Provide advice about the positive reasons to quit (such as health, cost)	
Provide information	With the AYA permission, ask:	
about e-cigarettes and risks associated with use	'Would you like me to give you some information about vaping?'	
	Offer NSW health Factsheet from the NSW Health Campaign 'Do you know what you're vaping?'	
	https://www.health.nsw.gov.au/tobacco/factsheets/vaping-factsheet- young.pdf	
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4. Assist – assist all AYA to quit vapes

Clinicians need to determine the AYA readiness to quit in order to tailor intervention specific to quit vaping (Appendix 2)

Assist – Not ready Pre-contemplation	Discuss the benefits of quitting and risks of ongoing use		
	Provide information about second hand e-cigarette/vape exposure		
	Encourage re-engagement when ready		
Assist – Not sure Contemplation	Engage in motivational interviewing counselling (Appendix 3)		
	Explore motivations to quit: 'What are the good things and not so good things about e-		
	cigarettes/vapes?'		
	'What are some things that would be good about quitting?'		
	Explore Barriers to quitting:		
	'What's stopping you from quitting?' 'What are some of barriers to quitting?'		
	Offer assistance when ready		
	Arrange follow up appointment to re-assess their readiness to change and offer further motivational counselling		
Assist – Preparation	Provide affirmation and encourage decision to quit e-cigarettes/vapes.		
	Assist AYA to develop own Quit Plan (Appendix 4)		
	Quit Plan should include behavioural approaches/strategies to support the AYA to increase the chance of quitting vapes.		
	Recommend pharmacotherapy – combination Nicotine replacement therapy is most effective accompanied by behavioural supports (Table 1)		
	Assist AYA to develop relapse prevention strategies (Appendix 6)		
	Provide AYA the number to Quitline - 137848		
Assist – Action and Maintenance	Congratulate them for taking the step to quit e-cigarettes/vapes		
	Assist AYA to develop relapse prevention strategies		
	Review quit plan		
	•		

5. Arrange – arrange follow up appointments and or contact to review progress and strengthen their commitment to quitting vapes.

Clinicians should arrange follow up appointments with AYA to review progress, offer further support, strengthen motivation to quit and review effectiveness of NRTs.

Arrange	AYA - committed to quitting	
follow-up appointments	Congratulate them and affirm their position Review progress and challenges	
арропшненс		
	Review pharmacotherapy and effectiveness (Table 1)	
	Encourage continuation of pharmacotherapy	
	Normalise lapses and relapses and support them to re-focus on achieving their goals	
	Help them reflect on triggers/situations that led to the lapse/relapse	
	Explore relapse prevention counselling and develop personalised strategies to maximise their quit journey (Appendix 6)	
	Encourage other supports through various modes of interventions (face to face, telehealth, SMS texts)	
	AYA - relapsed Offer support and reframe as a learning experience	
	Explore reasons for relapse	
	Offer ongoing support	
	Encourage future quit attempts and review plan	

Health professional can access the KidsQuit smoking cessation brief interventions E-learning program.

https://kidshealth.schn.health.nsw.gov.au/kidsquit-smoking-cessation-brief-intervention

The e-learning package is evidence based learning and includes the following modules:

- 1) Smoking prevalence and health effects
- 2) Brief interventions: The 5A's of smoking cessation
- 3) Adolescents and smoking
- 4) NRT and pharmacotherapy
- 5) Mental health and smoking (2016)
- 6) Young Aboriginal people and smoking (2016)
- 7) Pregnancy and smoking (2016)
- 8) Vaping and Young People (2022)

Table 1 - Nicotine Replacement Therapy to assist with quitting vapes (7)

	Nicotine replacement product* (patch, gum, lozenge)	
Characteristics	Avoid use of nicotine inhalators as it mimics use of e-cigarettes/vapes	
	Daily e-cigarette/vaping of nicotine containing products	
Clinical Indicators	Withdrawal symptoms and/or cravings	
	TTFV – within 30 minutes of waking	
NRT dosage	** Combination therapy – nicotine patch with a short-acting products to reduce breakthrough cravings is recommended	
guide	Refer to direction for use and possible side effects of NRTs to ensure safe and effective treatment and patient education (Appendix 7)	
	Use of NRTs can be used 2 weeks prior to quit date to optimise attempt to quit.	
NRT Patch	Nicotine patch (maintenance dose) – dosage should be titrated as needed	
	If TTFV within 30 minutes of waking, withdrawal symptoms and cravings present – consider medium to high doses :-	
	- Start with 14mg/24hr patch and titrate as needed.	
	 Add short acting NRTs (gum, mini lozenge, lozenge) for breakthrough cravings and use freely as per guide below 	
	Use 16hr patch if AYA experiences nightmares with 24hr patch – 10mg/16hr patch and titrate as needed.	
	Individuals may require to start with a higher dose of 21mg/24hrs or 15mg/16hr nicotine patch if TTFV is within 5 minutes of waking, with withdrawals and intense craving.	
	Dual use of smoking and e-cigarette/vape are likely to need a higher dose of NRT patch 21mg/24hr or 15mg/16hr	
	Use maintenance patch for 4–6 weeks, then switch to the next lowest dose patch for 2–4 weeks.	
	Continue weaning until AYA is able to resist cravings using behavioural strategies alone	
	Short acting nicotine (for breakthrough cravings)	
NRT oral form	Gum: Use one piece (2 mg or 4 mg) every 1–2 h	
(short acting)	2mg: 8-20 pieces/day	
	4mg: 4-10 pieces/day	
	Lozenge: Use one mini lozenge/lozenge (2 or 4 mg) every 1 to 2 h (9-15 pieces)	
	Mini lozenge: 1.5mg mini lozenge 9-20 pieces or 4mg 9-15 pieces/day	

* NRT is only indicated for >12 years. See https://www.mims.com.au/ for dosing and further information. Contraindications can also be – people weighing less thank 45kg; known hypersensitivity to nicotine; phenylketonuria; caution use after acute cardiovascular incidents.

www.health.nsw.gov.au/tobacco/publications/managing -nicotine-dependence.pdf

**24-hour patch may affect sleep therefore can recommend using the 16-hour patch 16-hour patch comes in 25mg, 15mg, and 7mg strength

Drug interactions with Smoking Cessation

There is preliminary evidence that, as with smoking, vaping may produce toxic effects that induce the generation of polycyclic aromatic hydrocarbons and other harmful substances (9). Caution is recommended for AYA who are dual users (cigarettes and e-cigarette use) and are receiving medications known to be metabolised by CYP1A2 enzyme. Medication monitoring should be used even if considered light smokers. Nicotine Replacement Therapy does not affect medication levels. https://www.health.nsw.gov.au/tobacco/Factsheets/tool-7-guide-dug-interactions.pdf

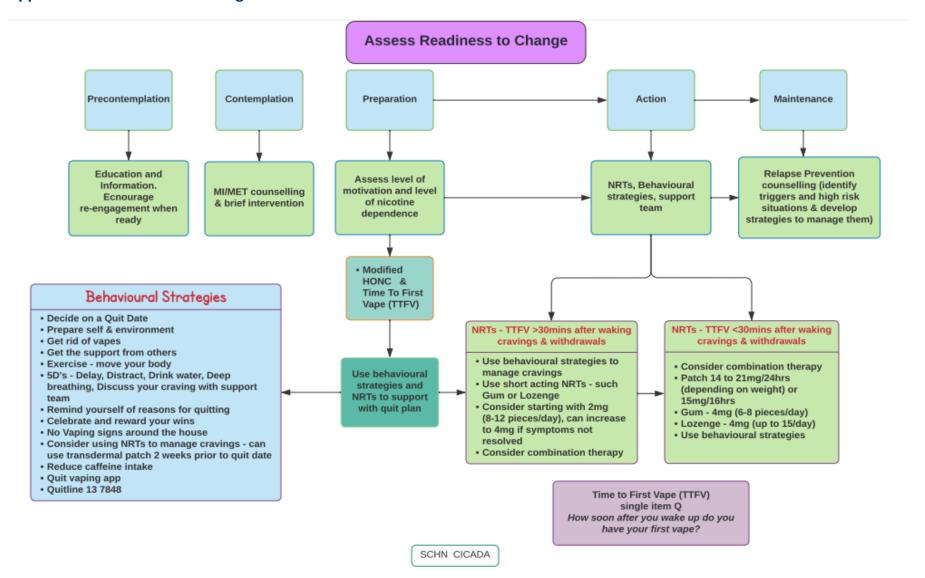
Appendix 1 – Modified Hooked On Nicotine (M-HONC)

Questions	YES	NO		
Have you ever tried to stop vaping, but couldn't?				
Do you vape <u>now</u> because it is really hard to quit?				
Have you ever felt like you were addicted to vaping?				
Do you ever have strong cravings to vape?				
Have you ever felt like you really needed to vape?				
Is it hard to keep from vaping in places where you are not supposed to, like school?				
When you tried to stop vaping (or, when you haven't vaped for a while)				
Did you find it hard to concentrate because you couldn't vape?				
Did you feel more irritable because you couldn't vape?				
Did you feel a strong need or urge to vape?				
Did you feel nervous, restless or anxious because you couldn't vape?				
Total Score:				

Scoring:

The MHONC is scored by counting the number of YES responses. A young person has who has a score above zero would indicate they have a level of dependence on nicotine and they have lost full autonomy or control of their use of e-cigarettes/vapes.

Appendix 2 – Readiness to change flowchart



Appendix 3 - Recording your decision

Research shows that it helps to write down your reasons for making a change, looking at it from all angles. You might like to take a minute to write out your personal reasons for vaping and thoughts about change using the table below.

Rate each item on a scale of one to ten to indicate how important these are to you, with one being not at all important and ten being extremely important

Pros and cons of Vaping

Good things about Vaping		Not so good things about Vaping	
	/10		/10
	/10		/10
	/10		/10
	/10		/10
	/10		/10
	/10		/10
	/10		/10

Total Total

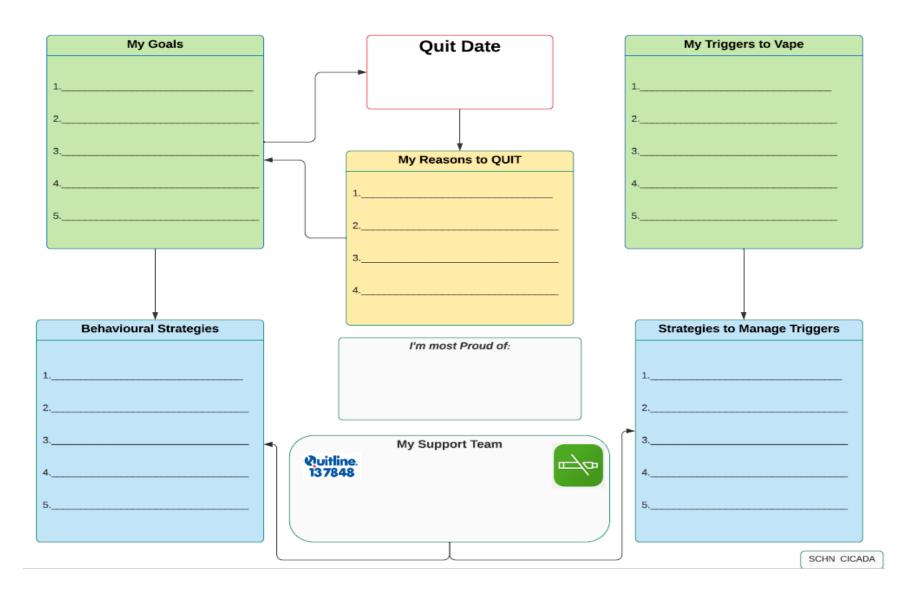
To get a further perspective, it is useful to record the pros and cons of changing or quitting. You may find that your reasons for change are not just the opposite of the reasons for vaping. This added information may help reinforce your decision for change.

Pros and Cons of change/quitting

Good things about Vaping		Not so good things about Vaping	
	/10		/10
	/10		/10
	/10		/10
	/10		/10
	/10		/10
	/10		/10
	/10		/10

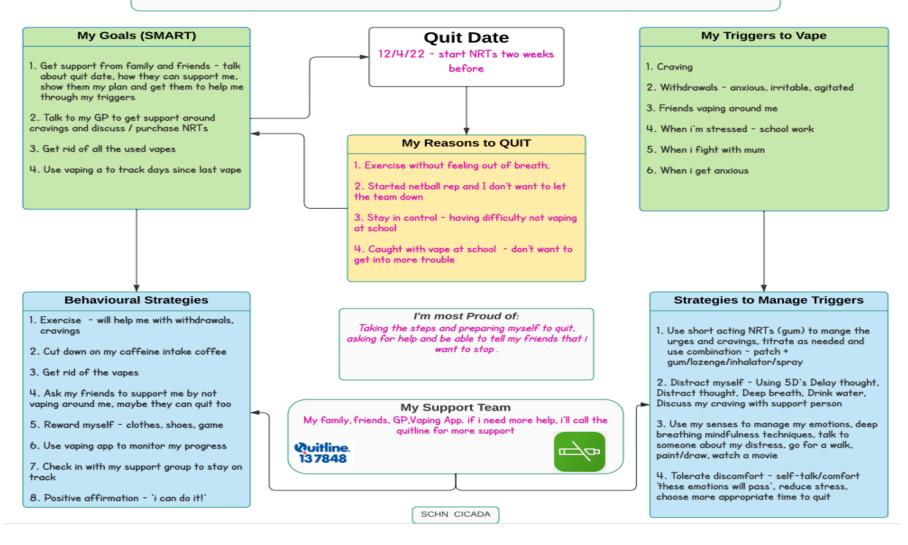
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Appendix 4 - My Quit Plan (Example)



Appendix 5 - My Quit Plan (Example)

Cognitive Behavioural approaches to quitting - my quit plan



Appendix 6 - Coping with High-Risk Situation

Make a list below of your personal high-risk situation and or triggers and a plan for dealing with them. Examples include: with friends, at a party, feeling down or anxious, relaxing at home, getting paid, celebrating

Make sure your plan/strategy is realistic and something you can easily do. It should also be enjoyable if possible.

High Risk Situation/Triggers	Strategy or plan

Remember: If you have a slip up/lapse, don't beat yourself up. These are all experiences to learn from. Reflect on where the slip up was (maybe going into a situation and not anticipating other people's use or maybe not being prepared about what to say if someone offers you something.

NRT product information

Direction for use

NRT Product	Direction for use	
Nicotine Patch	Apply the patch to clean, non-hairy, dry skin on the upper body (chest, rib cage, back, side of upper arm) and hold down for 10 seconds.	
	Rotate to different parts of the body each day to avoid skin irritation	
Nicotine gum	Place one gum in your mouth and chew slowly until a strong peppery and/or tingling sensation is noticed	
	'Park' the gum between your gum and cheeks or under the tongue for 1-2 minutes or until the taste disappears	
	Chew again until the taste returns and repeat the process for around 30 minutes then discard.	
Nicotine lozenge	Place lozenge in mouth and roll around in the mouth for a few times to release the nicotine.	
	Park between the cheek and gum or under the tongue.	
	Continue to move every 5 minutes or so and repeat the process for up to 30 minutes or until the lozenge is completely dissolves	

Possible side effects of NRT products

No serious side effects of either short or long term NRT use have been reported over the 30 years it has been in use. Side effects are relatively minor for most users however individuals may experience some minor effects when using NRT. The most common ones and suggested ways to manage are listed below.

NRT product	Side effect	How to manage
Patches	Skin irritation	Rotate the patch site and use hydrocortisone 1% cream for skin irritation
	Sleep disturbance, vivid dreams	Apply the patch in the morning rather than at night. Remove the patch before sleep. Decrease caffeine intake by half.
	Patch doesn't stick, keeps falling off	Use stretch adhesive tape over patch Ensure skin is free from creams and lotions (including sunscreen or insect repellent) When applying the patch, do not check if it has stuck by lifting the edge as this may make it loose
Oral NRTs	Dyspepsia, nausea, hiccup, headache, cough, dry mouth, throat irritation	Check the product is being used correctly or change to a different oral product

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