Implications of nicotine vaping products for tobacco control in ASEAN low-income and middle-income countries: in-depth interviews with experts from the region

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ABSTRACT

Objectives The use of nicotine vaping products (NVPs) has increased in low-income and middle-income countries (LMICs) in the Association of Southeast Asian Nations (ASEAN) region; however, it is uncertain what implications the presence and use of NVPs have for tobacco control.

Design In-depth interviews were conducted to explore ASEAN tobacco control experts’ views on the rise of NVP use in ASEAN LMICs, current NVP policies, the potential harm reduction and smoking cessation utilities of these devices, and what implications they may have for tobacco control. Data were analysed using inductive, reflexive thematic analysis.

Results Five themes emerged: (1) NVPs threaten tobacco control in ASEAN LMICs; (2) commercial factors influence youth appeal and access: product attributes, marketing, supply chains; (3) opposition to the smoking cessation and harm reduction utilities of NVPs; (4) policies are inconsistent and fragmented in the region; and (5) tobacco industry power and tactics have been used to capture NVP markets.

Conclusions ASEAN tobacco control experts believe that NVPs pose a threat to youth and non-smokers in LMICs in the region, largely because of tobacco industry NVP marketing activities. They do not support the use of NVPs for smoking cessation or harm reduction and call for more restrictions and consistent policy enforcement across the region to protect young people, while also cautiously recognising that use of NVPs may have some benefits for smokers.

INTRODUCTION

Globally, there has been a rapid uptake of nicotine vaping products (NVPs)—also known as electronic cigarettes (e-cigarettes)—among young people.1-4 Evidence suggests that young people are susceptible to NVPs, often experimenting with these devices during adolescence and early adulthood.5 6 Youth have also been the target of NVP companies’ marketing strategies,7 8 with websites and social media used to deliver marketing messages,9-12 create brand associations that appeal to young people13-15 and promote product flavours and vaping sensations.16 17 Social media platforms have also been used to sell NVPs and nicotine e-liquids.18

The risks and benefits of these devices have been debated and remain controversial. There is concern that NVPs may act as a ‘gateway’ to cigarette smoking among young people,19 with studies showing that NVP use is associated with increased risk of smoking uptake among non-smoking youth.20-23 However, others argue that common liability theories of SafeChoice may explain the association found between NVP use and smoking, wherein youth who take up NVPs are more prone to risk-taking behaviours due to personal or environmental factors.24-28 This notion appears to be supported by evidence from a longitudinal study in the United States of America (USA), which revealed that NVP use, among

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ Online data collection enabled the participation of stakeholders from across the ASEAN region, which allowed the study to explore differences and similarities between countries.

⇒ Reflexive thematic analysis facilitated authors’ recognition of how their socioeconomic and educational backgrounds influence their analysis and interpretation of the qualitative data.

⇒ Interviews only focused on tobacco control experts’ opinions concerning NVPs and their implications on tobacco control, rather than the impact of these devices and policies on smoking and vaping attitudes and consumption.

⇒ The study focused on LMICs so the findings may not be transferable to understanding the rise and implications of NVPs in high-income countries in the region or elsewhere.
Another contentious issue is the use of NVPs for smoking cessation and harm reduction. A 2022 Cochrane systematic review—40 randomised controlled trials (RCTs) of NVPs for smoking cessation—concluded that there is high-certainty evidence that the use of NVPs, compared with nicotine replacement therapies (NRTs), increase quit rates among smokers.32 However, another 2022 systematic review (12 RCTs) concluded that there was limited or insufficient evidence that NVPs are more efficacious as cessation aids compared with NRTs.25 Further, some argue that NVPs may have health benefits as a harm reduction strategy for smokers,24 particularly for those who are unwilling or unable to quit smoking due to the much lower health risk of vaping as compared with smoking.33–36 Others suggest that there are likely net public health gains from smokers switching completely to NVPs.37 38 In contrast, others raise concerns about dual use (concurrent cigarette smoking and NVP use), which, without eventual cessation, exposes individuals to the risk of both vaping and smoking.39 40 This contested area of research has led to different interpretations and translations of evidence, resulting in diverse NVP policy-making globally. For instance, Australia has adopted a prescription-only model where NVP use is prohibited unless prescribed by a doctor, while NVPs are regulated as consumer products in the UK and New Zealand and their use as smoking cessation aids is encouraged.41

The Association of Southeast Asian Nations (ASEAN) region has made progress on tobacco control over the past 20 years, with most countries ratifying the WHO Framework Convention on Tobacco Control (FCTC) and introducing policies to reduce the supply of and demand for tobacco products—including tobacco industry influence through restrictions on marketing and corporate social responsibility (CSR).42 However, evidence suggests that multinational NVP companies have penetrated the markets in the ASEAN’s eight low-income and middle-income countries (LMICs): Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand and Vietnam.43 44 Research also shows that young people have started to experiment with and use these devices in various countries in the region,45 42 including among university students in Vietnam46 and school children in Malaysia,47 Indonesia,48 and the Philippines.49 Websites and social media have been used to promote and directly sell NVPs and nicotine e-liquids to young people in ASEAN LMICs, particularly in Indonesia,50 51 where these online platforms advertise vape stores where youth can try and buy these products.43 Evidence has also demonstrated that exposure to these marketing tactics influences young people’s knowledge of NVPs in Indonesia,48 Thailand2 and Cambodia34 and has been associated with NVP use among young people in Indonesia54 and Vietnam,55 but not among Thai university students.56

Similar to other jurisdictions,57 ASEAN countries have adopted various regulatory stances in response to the rise of NVPs, with policies ranging from prohibitionist to partial restrictions. Five countries (Singapore, Brunei, Cambodia, Laos and Thailand) have introduced complete bans on the import, sale and use of NVPs; three countries (Philippines, Malaysia and Vietnam) permit the import, sale and use of these devices but restrict some advertising, flavours, youth access and use in public places; and Myanmar has yet to adopt specific legislation for these devices.41 Indonesia allows the sale, importation and use of NVPs but introduced a 57% tax on nicotine e-liquids, which was shown to increase prices and decrease NVP use, but increase cigarette smoking.48 The Philippines has shifted from tightly regulating NVPs as medical products to assist with smoking cessation to liberalising access and lowering the legal age of purchasing these devices from 21 to 18 years.59 No study has explored how effectively these different regulations have been implemented, particularly in LMICs where tobacco control implementation has been lacking,42 or the potential reasons behind the rapidly changing and variable regulatory stances to NVPs in the region.

While interviews with tobacco control experts have provided insights and recommendations into reducing smoking in the ASEAN region40 61 and elsewhere,62 no study has explored their views on the rise of NVPs in the region. Since the region’s two high-income countries (Singapore and Brunei) have banned NVPs44 and have relatively strong tobacco control,63 the current study aimed to explore tobacco control experts’ opinions on the rise of NVP use in the ASEAN LMICs, including current policies, potential harm reduction and smoking cessation utilities of these devices, and what impact NVPs might have on tobacco control in the region.

METHODS
Design
This research was part of a broader study into cigarette and NVP use in ASEAN LMICs, described previously, which involved in-depth interviews with tobacco control experts.54 Methods were reported using the consolidated criteria for reporting qualitative research.65

Sample and recruitment
ASEAN tobacco control experts were recruited using convenience sampling in late 2021. Inclusion criteria was experience in tobacco control advocacy, research, policy or governance in one or more ASEAN countries; 18 years or older; speaks English; and has no conflicts of interest with the tobacco industry (self-reported). A list
of regional experts (n=16) was compiled through the authors’ professional networks, who were then invited to participate via email. This invitation included a request to refer other potential participants who may be suitable to join the study to snowball sample additional experts outside the authors’ networks. Participants provided written informed consent.

**Data collection**

Participants were interviewed according to a guide developed by the authors (online supplemental material), including open-ended questions and probes based on NVP literature and policies from western, high-income and ASEAN countries. Author TS interviewed participants via online software, which enabled experts from various countries to join. Each interview took approximately 60 min, was conducted in English and was audio recorded. Interview recordings were transcribed using software, which were then edited and anonymised by TS. Participants were emailed their transcripts to validate, which were then uploaded to NVivo for analysis.

**Data analysis**

Inductive, reflexive thematic analysis was used to examine the data, including data familiarisation, note-taking, coding, developing and labelling themes and subthemes and writing results. Authors TS and VW independently coded the data and met to discuss differences in interpretation. The authors met regularly to discuss data analysis and promote reflexivity, which aimed to identify how their backgrounds may have impacted the data interpretation. Factors that may have impacted the analysis included their knowledge of tobacco control, experience conducting research and living in Australia and ASEAN LMICs (Cambodia and Indonesia), and linguistic and cultural barriers with some participants.

**Patient and public involvement**

None.

**RESULTS**

In total, 16 experts were invited to join the study, 4 failed to respond, 2 were not available and 10 chose to participate. Snowball sampling led to the recruitment of one additional participant. Three participants were experts in tobacco control across the ASEAN region and eight were primarily experts in their own country (table 1). Two participants located outside the region were included due to their ASEAN region experience. Most participants were engaged in tobacco control research (n=7) or advocacy (n=3). Five themes emerged from the qualitative analysis that are described below.

**NVPs threaten tobacco control in ASEAN LMICs**

Participants described NVPs as a threat to tobacco control in ASEAN LMICs, suggesting an underlying assumption that these devices are similarly or more harmful than combustible cigarettes or could lead to uptake of smoking or reduce the likelihood of smokers quitting. Some noted that NVPs were an added challenge to tobacco control in the region, which was particularly concerning in countries with weak tobacco control, such as Indonesia, while others worried that these devices could undo the progress:

I’m really concerned about it everywhere. It has the ability to derail tobacco control. It has the ability to, I guess, turn back some of the successes that have been so long struggled and fought for. [Participant 11]

All participants commented on the rapid increase in NVP use among young people in the region, which was a particular concern due to the region’s relatively young population. Several participants were concerned about the potential ‘gateway’ effect of NVP use for future nicotine addiction and cigarette smoking:

We see that this is a gateway. When young people become addicted to nicotine, they will eventually become lifelong nicotine addicts... Whether it’s through e-cigarettes or cigarettes or some other form, they will find a way to get their fix when they’re adults... So, we’re quite worried if young people are taking up e-cigarettes. [Participant 5]

Participants compared the threat of these devices to cigarettes, with some comments suggesting that they felt smoking risks were comparable to NVP risk. Others noted that NVP use was overtaking smoking among young people, with some attributing this rise to youth switching from cigarettes to NVPs. These concerns suggested an assumption that adults and youth switching from smoking to vaping would either lead to increased public harms or fail to reduce them.
I see they are switching to electronic cigarettes... It’s cheaper than cigarette products if you count the price of a pack of cigarettes compared to the price of the liquid. It’s very cheap, so it’s also appealing for the young people. [Participant 1]

**Commercial factors influence youth appeal and access: product attributes, marketing, supply chains**

Participants discussed how commercial factors influenced ASEAN youth’s appeal of and access to NVPs. The shape and design of these devices were described as appealing to youth because they differentiated NVPs from combustible cigarettes and aligned with their desire for something ‘interesting and sleek... like a technological innovation’. They also recalled that novelty and variety of nicotine e-liquids were particularly appealing to youth:

They have so many flavour... I think the flavours are always attractive for young people... They like to try something new. [Participant 1]

NVP marketing was seen as a means of generating brand awareness and youth engagement, with some recalling how the marketing strategies replicated the advertising, promotions and sponsorship strategies of traditional tobacco companies, including through individual sales promotions, giveaways at events and point-of-sale marketing in retail stores. NVP sponsorship also emulated some of the tobacco industry’s previous strategies for promoting tobacco products before they were banned:

The other big ones are obviously linked to Formula One, which to me is just so old school, like (it) harkens back to the Marlboro Lucky Strike racing cars of the 80s and 90s... You’ve got the same companies with the different products doing the same kind of marketing, right, linking it to edgy, risky, globally watched sports people, but now they’re vaping products. [Participant 11]

Online marketing was described as prominent and targeting youth across the region, with websites and social media promoting these devices and associating brands with sociocultural appeals and festivals, celebrities and online influencers. Online marketing also associated NVPs with civic movements that are important to youth such as global citizenship and environmental protection—with one brand promoting their ‘carbon neutral vape’ to align with the climate change movement. Participants also raised concerns that online marketing was being used to differentiate NVPs from cigarettes and to associate cigarettes with an older generation of smokers. These concerns suggested a common position that smoking and vaping are comparable in terms of their potential risks and harms:

Trying to say the type of people that use this product are interesting, artistic, citizens of the world kind of people... This isn’t your grandmother’s cigarette... This is something different and unique... If I was in the tobacco industry, I wouldn’t want people to link vaping and smoking together because... smoking has such a terrible reputation... so much stigma attached to it. You want it to be presented (as) something new and fresh and different and for young people. [Participant 11]

Participants discussed how supply chains might influence young people’s appeal and access to these devices. Some recalled how NVPs were sold through ‘vape shops’ that operate like cafés, where young people can try different devices and flavours, discuss products and inhaling techniques with salespeople, and socialise with their friends and other users. They also recalled how these retailers created an environment that promoted experimentation with, and a lifestyle around, these devices:

The vape shops all look fancy... They try to sell a higher life... more modern... It’s like attractive to young people. [Participant 10]

Participants discussed how NVPs and nicotine e-liquids were sold through online retailers (Shopee, Lazada, Tokopedia) and on social media platforms (Facebook, Instagram, YouTube, TikTok), which made them accessible to youth. One participant recounted how online food delivery platforms sold and delivered these items to people’s homes in Malaysia, which enabled companies to continue operating during COVID-19 lockdowns:

They were not allowed to open, but they want to utilise the online sales medium... Grab or Foodpanda or something like that... People were then ordering and then sending their products utilising these services... Although they may not be opening the shop because of COVID, but the sale continues even during the peak of the pandemic in Malaysia. [Participant 8]

**Opposition to the smoking cessation and harm reduction utilities of NVPs**

Most participants opposed the use of NVPs for smoking cessation and harm reduction. They provided four main reasons to justify this position. First, participants felt there was a lack of evidence to support NVP use as a cessation aid for smokers, but some were willing to modify their opinions if the evidence became stronger:

The level of evidence is still moderate—it’s not high-level evidence. But we look forward to more evidence in the future, but until that time, we cannot conclusively say that e-cigarettes, in general, are safe and effective for smoking cessation. [Participant 8]

Second, some opposed NVP use for smoking cessation because switching from cigarettes to vaping maintains nicotine dependence, unlike other cessation interventions that wean smokers off the substance entirely. Third, others were opposed to NVP use for smoking cessation or harm reduction because it can lead to dual use, which,
they claimed, prolongs smoking and nicotine consumption. Participants opposition was often grounded in concerns about the unintended consequences of, and lack of evidence for, the use of NVPs for smoking cessation and harm reduction.

Research shows that e-cigarette use doesn’t help these people to quit, but most of the users become dual users like I say more than 50%. So right now, I don’t think we have the strong evidence to show that e-cigarette is very help (for) people to quit. [Participant 9]

Fourth, participants were also opposed to NVP use as a cessation or harm-reduction strategy because of the nicotine e-liquids’ potential harms and addictive properties, while others were concerned that sharing NVPs among groups may spread infectious diseases, including ‘contamination of the coronavirus’. While there were also concerns about unknown harms of NVPs, with current evidence insufficient to rule out possible long-term impacts, some participants supported pragmatic use of these devices for smoking cessation and harm reduction. One participant supported NVP use for smokers trying to quit but banning access for non-smokers, while another embraced their use in cessation interventions alongside current treatments to eventually achieve full nicotine cessation:

We try to use all the approved medications first, and if need be, that will be the last resort… and later ask them to quit e-cigarettes… Due to the insufficient evidence available to us regarding effectiveness and efficacy, (e-cigarette use) is not still the first line of treatment for smokers. [Participant 8]

NVP policies are inconsistent and fragmented in ASEAN LMICs

Theme 4 focused on how NVP policies are inconsistent and fragmented in ASEAN LMICs. Participants recalled how NVP policies varied from limited restrictions in some countries (Vietnam and Indonesia) to complete bans in others (Cambodia and Thailand), or how some countries had or were planning to introduce taxes on NVPs or nicotine e-liquids but were either delayed or insufficient to deter youth uptake. Some participants discussed NVP policies in comparison to restrictions on cigarettes and their potential impact on smoking, with a few comments suggesting the assumption that the risk and harms from these devices are comparable to smoking.

The taxes on them are lower than the taxes on cigarettes… If they’re cheaper to use e-cigarettes, then young people will start using those and maybe we’ll learn our lesson and then eventually raise the taxes for e-cigarettes… But then by that time, the damage has been done, so you have a new generation of nicotine addiction. [Participant 5]

Participants raised concerns that NVPs were not defined as tobacco products in some ASEAN LMICs, with Cambodia and Indonesia legislating them as electronic devices or addictive substances. This situation meant NVPs were not regulated under existing tobacco control laws or under the authority of health departments, which created loopholes in regulations and made it challenging for health officials and advocates to influence or enforce regulations:

The Ministry of Finance…they only charge excise tax to tobacco products, but not the electronic cigarette. They say that we cannot regulate any kind of e-cigarette because it is an electronic device… It often presents difficulty for tobacco control to offer authority and especially to control these e-cigarette(s) [Participant 3]

Participants expressed concerns regarding the lack of compliance with regulations in some ASEAN LMICs, with violations including in-store and online sales of NVPs and nicotine e-liquids in countries where they are banned (Thailand and Cambodia) or vaping in public venues where they are restricted (Malaysia). Some participants related these violations to the government’s lack of regulatory enforcement:

It banned by the government… The issue is to enforce… the regulation so that youth cannot start using e-cigarettes… There is nothing else we can do because when you have the law…just implement. [Participant 6]

Tobacco industry power and tactics used to capture NVP markets in ASEAN LMICs

Theme 5 focused on how the tobacco industry was using its power and tactics to capture the NVP market in ASEAN LMICs, mainly through selling their own NVPs or nicotine e-liquids. Participants describe these actions as either the industry’s efforts to capitalise on the increasing popularity of these devices or to maintain their profitability alongside declining smoking rates globally and in the region:

This is a huge threat… the large tobacco companies all over the world are promoting their own brands of e-cigarettes… I think it’s just going to get worse rather than help solve the problem. [Participant 5]

Participants were suspicious of tobacco industry intentions in NVP markets in ASEAN LMICs, particularly due to the industry’s past and current activities to undermine tobacco control regionally and globally. For instance, some participants were concerned about the industry leveraging the reduced harm and smoking cessation utilities of these devices to promote their NVP brands, given their past efforts to promote cigarettes to young people. While others recounted incidences where the tobacco industry had lobbied for the legalisation or taxation of NVPs and nicotine e-liquids in countries where they are banned, one participant recalled that the industry had lobbied in opposition to the legalisation of NVPs in...
Indonesia because it threatened the tobacco farming and cigarette industries:

In Indonesia...we are (one of the)...biggest producers of tobacco in the world... (So) the tobacco industry in Indonesia...they often against the electronic cigarette... (I) many times read news about like the tobacco industry (is) against the electronic cigarette because it is a threat for them. [Participant 3]

**DISCUSSION**

The findings demonstrated that experts predominantly view NVP use as an emerging threat to tobacco control in ASEAN LMICs, with concerns about the rapid uptake of these devices among young people and the potential ‘gateway’ effect of vaping on non-smoking youth’s risk of smoking or nicotine addiction. In response to these perceived threats, most participants supported extending current bans on NVPs in some ASEAN countries44 across the whole region. These concerns align with evidence showing the increasing prevalence of NVP use among young people globally1–4 and research demonstrating an association between using these devices and smoking uptake among non-smokers.30–23

ASEAN tobacco control experts did not support the smoking cessation and harm reduction utilities of NVPs, mainly because they felt that evidence supporting the use of these devices for smoking cessation was insufficient, NVPs might maintain nicotine addiction among former smokers, dual use would prolong cigarette consumption among those who would otherwise quit, and the long-term harms associated with these devices remained unclear. These views align with literature that has raised concerns about the lack of evidence demonstrating the effectiveness of NVPs as a cessation aid,25 potential harms of these devices,72–74 and dual use.30,40 However, if the evidence strengthened, several ASEAN tobacco control experts were open to supporting the limited and controlled use of these devices as a component of cessation interventions and alongside NRTs—with the aim of substituting, reducing, and eventually stopping nicotine consumption altogether. While this approach aligns with evidence demonstrating the potential nicotine cessation utility of these devices,35 further consideration may be given to NVPs as a harm reduction strategy—as studies suggest that these devices are less harmful than cigarettes36–38 and substituting cigarettes for NVPs could be a pragmatic solution for smokers who are unable or unwilling to fully cease nicotine consumption.24 With the ASEAN region home to approximately 124.3 million adult smokers (10% of the world’s 1.07 billion smokers),42 NVP policies may benefit from a disaggregated approach when evaluating the potential impacts these devices may have on different groups—with NVPs posing a health threat to non-smokers but a potential opportunity for better health for current smokers.37,38

The interviews also revealed commercial factors that may influence young people’s appeal of, and access to, NVPs in ASEAN LMICs. Product attributes appear to be salient to young people in the region, with NVP flavours aligning with their taste preferences and device shape and design aligning with their desire for innovation and technology. Thus, in addition to the appeal of flavours to young people found in western, high-income countries,25,76 this study also raises concerns about the appeal of the device’s shape and design to youth. The research also revealed that NVP marketing in the region was focused on generating brand awareness and appeal among young people, aligning with what has been observed previously in western, high-income countries3–17 and in the region.43–46 While these marketing tactics mainly replicated the tobacco industry’s strategies targeting youth globally77 and regionally,28, they often focused on differentiating NVPs from combustible cigarettes—potentially in response to increasingly negative public perception of smoking. Moreover, the findings suggested that online and in-store supply chains were not only effective in providing access to youth—including during COVID-19 lockdowns and in countries where vaping is banned—but also formed part of marketing campaigns, with ‘vape shops’ selling NVPs and the lifestyle and community surrounding these devices. While previous research has illustrated how ASEAN youth learnt about NVPs and vaping practices on social media,48,52,53 further research is needed to understand how vape shops may shape young people’s attitudes and desires surrounding these devices.

Our participants noted inconsistent and fragmented NVP policies across ASEAN LMICs, similar to what has been observed globally57 and regionally.44,58 This situation could be driven by the varying interpretations and translation of research literature on NVPs that has been observed in high-income countries such as Australia and the UK.41 Our study also revealed how NVPs have been inconsistently classified by governments across ASEAN LMICs, with some labelling them as tobacco products and others as electronic devices, which created loopholes that were exploited by NVP retailers. While most ASEAN countries have progressed tobacco control with the implementation of the WHO FCTC,42 our findings suggest that similar progress on NVPs is being hindered by a lack of scientific consensus regarding the relative risks and smoking cessation potential of these devices and the absence of a framework to guide the development and implementation of policies. A global or regional framework may promote more consistent, evidence-based NVP policies that align with the current tobacco control and public health agendas in the region. Such a framework may assist with achieving the right balance between the aims of using NVPs for smoking cessation and harm reduction and that of reducing the likelihood that NVPs will undermine ASEAN LMICs’ progress on tobacco control.

Our study shows tobacco control experts to be concerned about the tobacco industry’s influence in...
NVP markets and policy-making in ASEAN LMICs. While multiple studies have demonstrated the industry’s attempts to influence tobacco control globally and regionally, the current study revealed how they were using a similar playbook of lobbying and CSR to pursue their interests in NVP markets in ASEAN LMICs. While experts in our study were mainly concerned about the industry’s promotion of their own NVP products and nicotine e-liquids, some evidence from high-income countries and the region suggests that the industry might pursue the ASEAN market through the acquisition of local NVP companies. Further research is needed to explore this in ASEAN LMICs. With smoking rates and sales declining globally, the tobacco industry’s attempts to preserve their profits by capturing NVP markets in ASEAN LMICs and elsewhere is likely to intensify. Health officials and advocates should consider the industry’s vested interests when formulating NVP policies that align with the current tobacco control agenda.

Limitations
Several limitations need to be considered alongside the research findings. First, tobacco control experts were not recruited from all ASEAN LMICs and the study did not focus on the region’s two high-income countries (Singapore and Brunei). Experts from these countries may have provided a broader range of insights on NVP trends and policies across the region. Second, most of the participants were from Cambodia and Indonesia, so the findings may over-represent situations in these countries. Third, recruitment and interviews were conducted in English, which meant that non-English-speaking experts were excluded from the study. Fourth, interviews were conducted online, which made it difficult for the interviewer and participants to build rapport. Fifth, the interviews were conducted by an Australian, resulting in linguistic and cultural barriers with some participants.

Conclusions
Tobacco control experts are concerned about the rapid increase of NVP use among young people in ASEAN LMICs, particularly the potential for these devices to undermine tobacco control, act as a ‘gateway’ to smoking, cause health harms, or prolong nicotine addiction. There is also cause for concern about the tobacco industry’s pursuit of NVP markets in the ASEAN region. Current policies are fragmented and inconsistent across the region, creating an environment where marketing and supply chains may influence young people’s appeal and access to these devices. If the evidence base strengthens, experts are open to the controlled use of these devices by smokers for cessation or harm reduction.

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Contributors
TS conceptualised the study, designed the interview guide, conducted data collection, analysed the data and drafted the manuscript. VW analysed the data and provided critical revisions to the manuscript. H-HF reviewed the data analysis and provided critical revisions to the manuscript. JWT provided critical revisions to the manuscript. All authors have seen and approved the final manuscript. TS is responsible for the overall content as the guarantor.

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REFERENCES
Tobacco control: how the world is responding to the vaping boom and bust.

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59 Sese LVC, Guillermo MCL. E-smoking out the facts: the Philippines’ vaping dilemma. *Tob Use Insights* 2023;16:.
63 Amul GGH, Pang TP. The state of tobacco control in ASEAN: framing the implementation of the FCTC from a health systems perspective. *Asia & the Pacific Policy Studies* 2018;5:47–64.
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