

2023

HOW CAN WE  
MINIMISE THE  
ADOLESCENT  
UPTAKE OF  
VAPING AND  
RELATED  
SOCIAL AND  
HEALTH HARM?

WORKSHOP REPORT



## ABOUT THE WORKSHOP

### TITLE

How can we minimise the adolescent uptake of vaping and related social and health harm?

### CONVENORS

- **Associate Professor Gary Chan** | National Centre for Youth Substance Use Research, The University of Queensland
- **Dr Janni Leung** | National Centre for Youth Substance Use Research, The University of Queensland
- **Emeritus Professor Wayne Hall FASSA** | National Centre for Youth Substance Use Research, The University of Queensland
- **Associate Professor Coral Gartner** | NHMRC Centre of Research Excellence on achieving the Tobacco Endgame
- **Dr Daniel Stjepanovic** | National Centre for Youth Substance Use Research, The University of Queensland

### DATE AND PLACE

26-27 April 2023

Mental Health Centre, Herston.


### FUNDING

This workshop was funded by the Academy of the Social Sciences in Australia, as part of the 2023 Workshops Program. Find out more at: <https://socialsciences.org.au/workshops-program/>

### CITATION

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# OVERVIEW

## **The workshop ‘How can we minimise the adolescent uptake of vaping and related social and health harm?’ was held at the Mental Health Centre, Herston, on 26-27 April 2023.**

Funding was provided by the Academy of the Social Sciences in Australia (ASSA) to assemble an interdisciplinary group of leading tobacco control experts, global drug policy analysts, clinical psychologists, prevention scientists, epidemiologists, a health economist, chemist, a toxicologist, and a biostatistician to conduct a workshop on the topic of youth vaping. The workshop aimed to bridge the gap between scientific findings and policy translation concerning e-cigarette use, with a focus on generating crucial research and policy questions related to youth vaping.

The two-day workshop was structured around 4 sessions with 23 in person and 5 virtual participants from various disciplines from different geographical locations in Australia. The workshop began with opening addresses by A/Prof. Gary Chan and ASSA Fellow Emeritus Professor Wayne Hall who highlighted the importance of tackling the pressing public health issue of youth vaping, its uncertain long-term harm, and the challenges in regulating products to assist smokers to quit while preventing youth use. After each presentation, the ideas raised in each session were discussed and debated amongst the group.

Our objectives for the workshop were:

1. To create a dialogue between academics, clinicians, social workers, and policymakers working on e-cigarette interventions and policies in Australia.
2. To evaluate the evidence supporting different interventions that minimise e-cigarette-related harms to non-smoking young people, and the use of vaping for smoking cessation.
3. To obtain perspectives from experienced mentors and new ideas from emerging leaders across diverse career stages, ages, genders, and cultural and linguistic backgrounds.
4. To advance scholarship in social science and public health by bringing together experts from a range of disciplines to join forces to design the best evidence-based and practical policy recommendations.

# WORKSHOP SUMMARY

## SESSION 1

### CURRENT REGULATORY FRAMEWORK: IMPLICATIONS ON YOUTH VAPING AND ADULT SMOKING

#### CORAL GARTNER

Professor Coral Gartner (Tobacco Endgame CRE, The University of Queensland) highlighted the international nature of the issue and acknowledged the challenges in assessing Australia's situation because of a lack of recent data on the prevalence of smoking and vaping (e.g., triennial National Drug Strategy Household Survey), widespread non-compliance for nicotine vaping regulations by retailers, and exaggerated media reporting on the prevalence and harms of vaping. Her presentation also discussed current and potential future approaches to combat youth vaping, including enforcement measures, health promotion, policy reforms, and school-based programs. Communicating risks and benefits of vaping must strike a balance, as stigmatisation and credibility must be considered.

#### HAYDEN MCROBBIE

Professor Hayden McRobbie (National Drug and Alcohol Research Centre, University of New South Wales) presented information on smoking prevalence in Australia and New Zealand, highlighting similarities and higher rates among indigenous populations. A 2022 Cochrane review showed e-cigarettes to be more effective than NRT for quitting smoking, but concerns about youth uptake,

nicotine dependence, and toxicant exposure remain. Striking a balance involves regulating vaping differently across countries, such as in the UK and New Zealand, with potential measures like flavour bans and plain packaging. Vaping may contribute to achieving smoke-free goals, but challenges in enforcement and maintaining a balance between benefits and risks persist.

#### DRISS OUAKRIM

Dr Driss Ouakrim (The University of Melbourne) introduced SHINE, a policy simulation platform, and discussed the 2025 New Zealand smoke-free plan and tobacco endgame strategies. Driss presented modelling findings on the health and cost impacts of five tobacco endgame strategies, which aim to reduce smoking prevalence permanently and rapidly to minimal levels. His study used two models to estimate the effects of various endgame policies, projecting decreases in smoking prevalence, increased health gains, and narrowing of health disparities between Māori and non-Māori populations. While the government may face a negative net financial position due to lost tobacco tax revenue, citizens may have higher incomes from reduced healthcare spending and improved productivity. However, modelling the effects of Australia's prescription-only vaping policies in New Zealand revealed mixed outcomes, with costs outweighing benefits over time for most population groups.

## SESSION 2

### VAPING AMONG YOUNG PEOPLE

#### GARY CHAN

A/Prof Gary Chan (NCYSUR, The University of Queensland) discussed media exaggeration on the gateway effect between vaping and cigarette smoking using relative risks and the importance of the accuracy of the information in health messages that targets young people. Gary's research found most of the current evidence did not evaluate if each study had sufficiently adjusted for confounders. He presented his systematic review and meta-analysis on vaping and smoking association. His analysis revealed that many studies have not sufficiently adjusted for confounders, leading to overestimated associations. It is important to understand the causal inferences of youth vaping and confounding because this has implications on intervention targets.

#### REBECCA MOUNSEY

Ms Rebecca Mounsey (Dovetail), who has a background in social work, discussed the increase in calls between 2019 and 2023 related to vaping received by Dovetail (a service that supports the youth alcohol and other drug sector). These calls were primarily requests for prevention and treatment-based responses. Rebecca identified limitations in current approaches, such as adult-centric solutions, lack of focus on young people and limited access to nicotine replacement therapies (NRTs) for youth who have developed nicotine addiction. She identified priorities for future work as updating the Queensland AOD curriculum to include vaping education, a focus on unintended consequences of school policies like school disengagement and reducing barriers for young people to access safer nicotine products.

#### EMILY STOCKINGS

Dr Emily Stockings (Matilda Centre, The University of Sydney) presented on the current trends and identified steps needed to prevent youth vaping. School-wide approaches should move away from suspensions and focus on understanding and addressing the underlying issues that lead young people to vape. The development of school-based prevention programs should be evidence- and theory-based, personalised, targeted, and engaging. It would be best if they can be delivered in a group format without involving parents or teachers.

#### AMY-LEIGH ROWE AND LAUREN GARDNER

Ms Amy-Leigh Rowe and Dr Lauren Gardner (Matilda Centre, The University of Sydney) spoke about the development of a school-based prevention program (Our Futures Prevention Model). It includes components that use a comprehensive social influence approach that was developed from expert advisory groups, previous RCTs, and youth consultations. The program includes relatable, online cartoon storyboards for Year 7-8 students that cover communication skills, resistance skills training, and evidence-based information. This program is currently being evaluated in a two-arm cluster RCT across NSW, QLD, and WA.

### SESSION 3

## E-CIGARETTES AS A SUBSTANCE DELIVERY SYSTEM

### JODY MOLLER

Dr Jody Moller (The University of Wollongong) presented her analysis of e-liquid and vapour content from confiscated devices. Her analysis revealed the presence of carcinogens, nicotine, flavouring and contaminants such as, Vitamin E, medium chain triglycerides, chromium, nickel and lead etc. She found that carcinogens were present, but at a much lower levels than in combustible cigarettes. Jody also shared a study examining how adults vape cannabis. In a study of people who used cannabis in Australia, vaping emerged as a preferred method over other routes of administration, with many respondents vaping more than 1 type of cannabis product but predominantly dried flower.

### CARMEN LIM

Ms Carmen Lim (NCYSUR, The University of Queensland) discussed the trends in youth vaping in the Monitoring the Future Study and the U.S. National Youth Tobacco Survey. Both studies revealed an increase in e-cigarette use and a decrease in cigarette use among young people, suggesting that e-cigarettes may be diverting young people away from cigarette smoking. Parallel to the surge in youth nicotine vaping, an upward trend was also observed in youth cannabis vaping. Carmen's study showed a shift in use from dried flower to cannabis oil/concentrates, raising concerns about higher THC levels in these products. Future surveys should carefully consider phrasing questions to keep up with evolving device terminology. Studies of trends in the US can provide lessons that can be learnt by other countries.

### TIANZE SUN

Ms Tianze Sun (NCYSUR, The University of Queensland) spoke about the increase in youth vaping is primarily driven by flavours, youth-appealing packaging, accessibility, and marketing. Social media plays a significant role in promoting vaping. There has been limited success to date in attempts to regulate social media. Despite decreased marketing expenditures, over 60% of US youth still see vape ads and studies show a relationship between seeing vaping-related ads on social media and using e-cigarettes. Vaping-related content on TikTok and YouTube are mostly positive and access is unrestricted. To protect young people, age verification processes should be strengthened, warning labels added, fines imposed on social media companies, and public awareness campaigns launched.

## SESSION 4

### HOW E-CIGARETTES ARE USED BY PEOPLE WHO SMOKE AND THOSE WHO DO NOT

#### BILLIE BONESVSKI

Prof. Billie Bonesvski (Flinders University) began session 4 with a presentation on the potential benefits and drawbacks of vaporised nicotine products for smoking cessation in priority populations with high smoking rates. Although smoking cessation treatments exist, support for quitting is often limited. Vaping is shown to be more effective than nicotine replacement therapy (NRT) for smoking abstinence. While concerns about vaping's harm persist, it is significantly less harmful than smoking. Billie also shared preliminary findings from her pilot trial, which demonstrated that e-cigs are acceptable and feasible alternatives to NRTs. She emphasised the importance of valuing patient preferences and considering vaping as a viable option for clients aiming to quit smoking.

#### RON BORLAND

Prof. Ron Borland (The University of Melbourne) presented evidence that in addressing youth vaping, we did not lose sight of the persisting issue of smoking traditional cigarettes, which affects 12-15% of the population, especially disadvantaged groups. Despite numerous tobacco control measures, smoking cessation remains difficult. Elimination of nicotine use is implausible, and the harm caused by smoking also largely depends on the mode of delivery. There is a need for cleaner nicotine alternatives, as they have varying levels of toxicity and harm. To combat smoking, a combination of push and pull strategies is needed, with more focus on monitoring using regular population-based surveys, and learning from the New Zealand experiment, using Australia as a control.

#### KYLIE MORPHETT

Dr Kylie Morphett's (Tobacco Endgame CRE, The University of Queensland) qualitative study examined health practitioners' experiences with Australia's prescription-only regulatory model for nicotine vaping products. Kylie's study found that health practitioners' advice is influenced by treatment goals, patient autonomy, and risk perceptions. There were concerns about the safety of e-cigarettes, gaps in evidence, and youth access to e-cigarettes. Recommendations included creating practical prescribing information, identifying quality-tested products, collecting data on accessibility, and enforcing regulations more effectively. Proposed reforms include banning personal importation and flavoured NVPs and allowing NVPs to be sold only in pharmacies.

#### PHONG THAI

Dr. Phong Thai (The University of Queensland) discussed monitoring total nicotine and tobacco consumption in Australia through wastewater analysis over the last five years. Analysing wastewater samples can assess the presence and nicotine metabolites excreted by individuals within a community. The study also showed the possibility of monitoring population level consumption conventional cigarette smoking and emerging nicotine products such as vapes. This new method improves data accuracy and provides timely bimonthly data on smoking and NVP use in the Australia population. Findings reveal an increase in nicotine consumption during the early months of the COVID-19 pandemic. The national monitoring program provided data on urban and rural areas and found a slower decrease in tobacco use after the pandemic than the increase in nicotine consumption seen early in the pandemic. Wastewater samples and urine pools were used to calculate per capita consumption, providing figures that matched survey-reported data.

# IMPACT AND OUTCOMES

## ENGAGEMENT

Both the workshop and the following public event had considerable interest from a range of disciplines and expertise (e.g., addiction experts, students, clinical psychologists, epidemiologists). There were over 420 individuals who registered for the public event held on 28 April 2023.

Prior to the workshop, Professor Coral Gartner, one of the presenters published a commentary in *Drug and Alcohol Review*, titled '*How do you solve a problem like vaping?*'.

Following the workshop, the summary and conclusions were presented at the hybrid NCYSUR symposium (28 April 2023) which attracted over 400 registrations. The public event was live tweeted by participants and organisers using the hashtag #NCSYUR23. The contents of the tweets were viewed more than 3000 times.

Emeritus Professor Wayne Hall also spoke to ABC news on the 2nd of May 2023 on "what does vaping do to your body and why is it being banned in Australia?"

Overall, public interest in the event and workshop far exceeded the organisers' expectations.

## RESEARCH DIRECTIONS

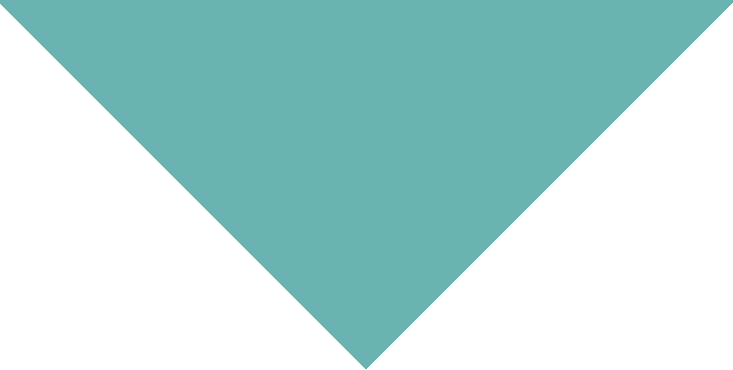
### **Close monitoring of the New Zealand (NZ) experience**

New Zealand originally followed Australia's prescription-only policy for nicotine vapes but has recently decided to allow vaping products to be sold as consumer goods in a regulated market. Recent research has shown that increased uptake of vaping has accelerated the decline in the smoking rate, particularly in the priority population of Māori women. At the same time, youth vaping has also increased. Australia's prescription-only regulation model for nicotine vaping products is in stark contrast to the New Zealand model. Despite stricter regulation, Australia has witnessed a strong increase in youth uptake, but the decline in the smoking rate was slower than in New Zealand. A further tightening of regulation is proposed so it is important to compare the effects of the Australian and New Zealand regulatory models.

### **Increase investment in surveillance of nicotine product use**

There is currently a lack of reliable nationally representative data on vaping in Australia. The latest nationally representative survey data on vaping was collected in the 2019 National Drug Strategy Household Survey. Given the rapid evolution of vaping products and trends, these data are a poor basis for policymaking. The 2022 National Drug Strategy Household Survey's data may not be publicly available until 2024. The Government should provide funding to expedite the analysis and publication of these data. Consideration should also be given to developing methods of monitoring





biomarkers of vaping in wastewater, a rapid and cost-effective means to monitor population drug use.

### **Development of consensus for school resources**

There is an urgent need to develop standardised educational resources and policy guidelines for schools to effectively discourage youth vaping at schools. Schools have largely relied on punitive measures, such as suspensions, for students who are caught vaping. Existing research shows that these measures are ineffective and can cause young people to further disengage from their education and exacerbate their vaping. A strong approach is required for those students found to be supplying nicotine vaping products to other students, such as diversion to education programs to prevent escalation of the behaviour to illicit drug supply.

## **POLICY RECOMMENDATIONS**


The experts reached consensus or agreement (at least 16 out of 18 experts; >85%) on several recommendations that could prevent and minimise youth vaping and related social and health harms:

### **Banning disposable vapes regardless of whether they contain nicotine**

Disposable vaping devices are popular among non-smoking young people, leading to a rapid uptake due to marketing and appealing flavours. They also pose health risk and have significant environmental impact, as their materials are difficult to recycle and can cause pollution when discarded. It was noted that there may be a minority of smokers with dexterity issues, for whom disposables are the easiest to use. If so, this could be covered by a prescription-only model.

### **Banning flavoured vapes regardless of whether they contain nicotine**

Removing appealing flavours like sweet fruit and confectionary flavours like chocolate and strawberry is a popular way to reduce the attractiveness of vaping products to young people. However, enforcing restrictions on flavours is challenging and complex due to the absence of a concrete definition of what defines flavour and evidence for the use of flavours to assist smokers to quit.



### **Plain packaging or medical packaging regardless of whether they contain nicotine**

The workshop participants agreed that bright, colourful packaging with attractive pictures such as cartoons and gimmicky names was inappropriate for products intended to be used by adults for smoking cessation and harm reduction purposes. One participant highlighted the potential importance of differentiating nicotine-containing and nicotine-free vaping products via different packaging requirements so as not to conflate the two products. Others suggested this could be achieved with a different colour scheme for nicotine and non-nicotine products, such as white for one and black for the other.

### **Decriminalising personal use of nicotine vapes**

Decades of research suggest that the criminalisation of substance use is not an effective way to reduce the harms of addictive substances. Criminalisation creates stigma and deters treatment-seeking, further exacerbating the problems of addiction. Criminalising personal use of nicotine vaping products, a much less harmful alternative to smoking, while allowing combustible cigarettes to be sold widely is likely to lead to more harm than benefit. Enforcement of current laws has focused on illegal supply, rather than illegal possession and use, despite potentially harsh penalties that could be applied to the latter. This suggests that the current legal framework is inappropriate and not fit for purpose.

### **Increased investment in services treating nicotine addiction (both from cigarette smoking and nicotine vaping)**

Despite the decline in cigarette smoking, recent wastewater monitoring data shows that nicotine use overall is on the rise, possibly due to nicotine vaping. Given that Australian governments plan to increase enforcement of sales bans on nicotine vapes for nonmedical purposes, we can expect increased demand for smoking and vaping cessation support, unless attempts to restrict illicit supply are largely ineffective. A failure to adequately meet this demand may mean that individuals who are currently vaping nicotine may switch to combustible cigarettes, the most harmful way of obtaining nicotine. Services will need to be co-designed with young people to ensure that their needs are met.

### **Increase access to nicotine prescriptions, particularly among young people**

Better access (potentially free or subsidised) to nicotine products (including NRTs and nicotine vaping products) should be facilitated for young people who are currently dependent on cigarette smoking or nicotine vaping to reduce harm. Young people can find it difficult to obtain prescriptions for nicotine vaping products. They are also less likely to see general practitioners for prescriptions. To reduce harms, nicotine products including NRTs and prescribed nicotine vaping products could be made more available for harm reduction through specialised services to help the young person eventually become nicotine-free.

### **Responsible media reporting of vaping**

Media reporting of students vaping has been overly sensationalist and exaggerated the scale of the problem. This has the risk of increasing perceptions among youth that 'everyone is vaping' and normalising the behaviour, leading to further pressure for youth to experiment with vaping. Media reports have also included information about how youth can obtain vaping products, which products are difficult to detect, how much they cost, flavours that are available and displayed examples of attractively packaged products with interesting names. These media reports are likely to have a promotional effect on young people and encourage use.

Furthermore, the moral outrage that has been generated from sensational media stories about youth vaping has led to extreme and responses from schools that are not evidence-based and may be doing more harm than good. Examples include (i) suspensions and expulsions, (ii) locking toilets leading to some children dehydrating themselves to avoid being 'caught short' with no toilet access, (iii) installation of 'vape detectors', (iv) installing cameras in toilets, and (v) even construction of new toilet blocks that are open air with less privacy to allow monitoring of students at substantial cost (funds that might be better spent on educational resources).

The development of best practice guidelines for media reporting of youth vaping, similar to those that are endorsed by the Australian Press Council for reporting of addictive drugs, is urgently needed.