Australian National University

Professor Emily Banks MBBS(Hons I) BMedSci(Hons I) PhD FAFPHM FAHMS
Professor of Epidemiology and Public Health
National Centre for Epidemiology and Population Health
College of Health and Medicine
Australian National University

Acton ACT 2601 Australia
www.anu.edu.au

5 November 2020

Committee Secretary
Select Committee on Tobacco Harm Reduction
PO Box 6100
Parliament House
Canberra ACT 2600
E: tobaccoharmreduction.sen@aph.gov.au

Dear Dr Hodder,

RE: Select Committee on Tobacco Harm Reduction

Thank you very much for your invitation to make a submission to the Select Committee on Tobacco Harm Reduction. The Australian National University is pleased to be able to contribute expertise to this very important issue.

This submission was prepared drawing on work, under my leadership, of team members contributing to relevant reports commissioned by the Commonwealth Department of Health (see submission), including: Emily Banks, Miranda Harris, Laura Ford, Robyn Lucas, Olivia Baenziger, Amelia Yazidjoglou, Sinan Brown, Melonie Martin, Tehzeeb Zulfiqar, Grace Joshy, Katie Beckwith, Katherine Thurber, Jennie Walker, Raglan Maddox, Alexandra Marmor, Christina Heris and Raymond Lovett.

By way of background, I am an epidemiologist and public health physician with an interest in large-scale population health studies, chronic disease, the health effects of smoking, pharmacoepidemiology, Aboriginal and Torres Strait Islander health and healthy ageing. I currently lead the Epidemiology for Policy and Practice group, run out of ANU's National Centre for Epidemiology and Population Health. I am an NHMRC Principal Research Fellow, a Fellow of the Australian Academy of Health and Medical Sciences and a Visiting Professor at the University of Oxford. The main emphasis of my work is identifying factors affecting individual and population health, to generate improvements in health policy, practice and outcomes.

I would be very happy to provide additional details to the Committee on the material contained in the submission if required and would be delighted to appear before the committee during the public hearings.

Please contact me directly via email or through ANU Government Relations at government@anu.edu.au.

Yours sincerely

Professor Emily Banks
Professor of Epidemiology and Public Health
National Centre for Epidemiology and Population Health
College of Health & Medicine

Australian National University

The Australian National University

Submission to the Select Committee on Tobacco Harm Reduction

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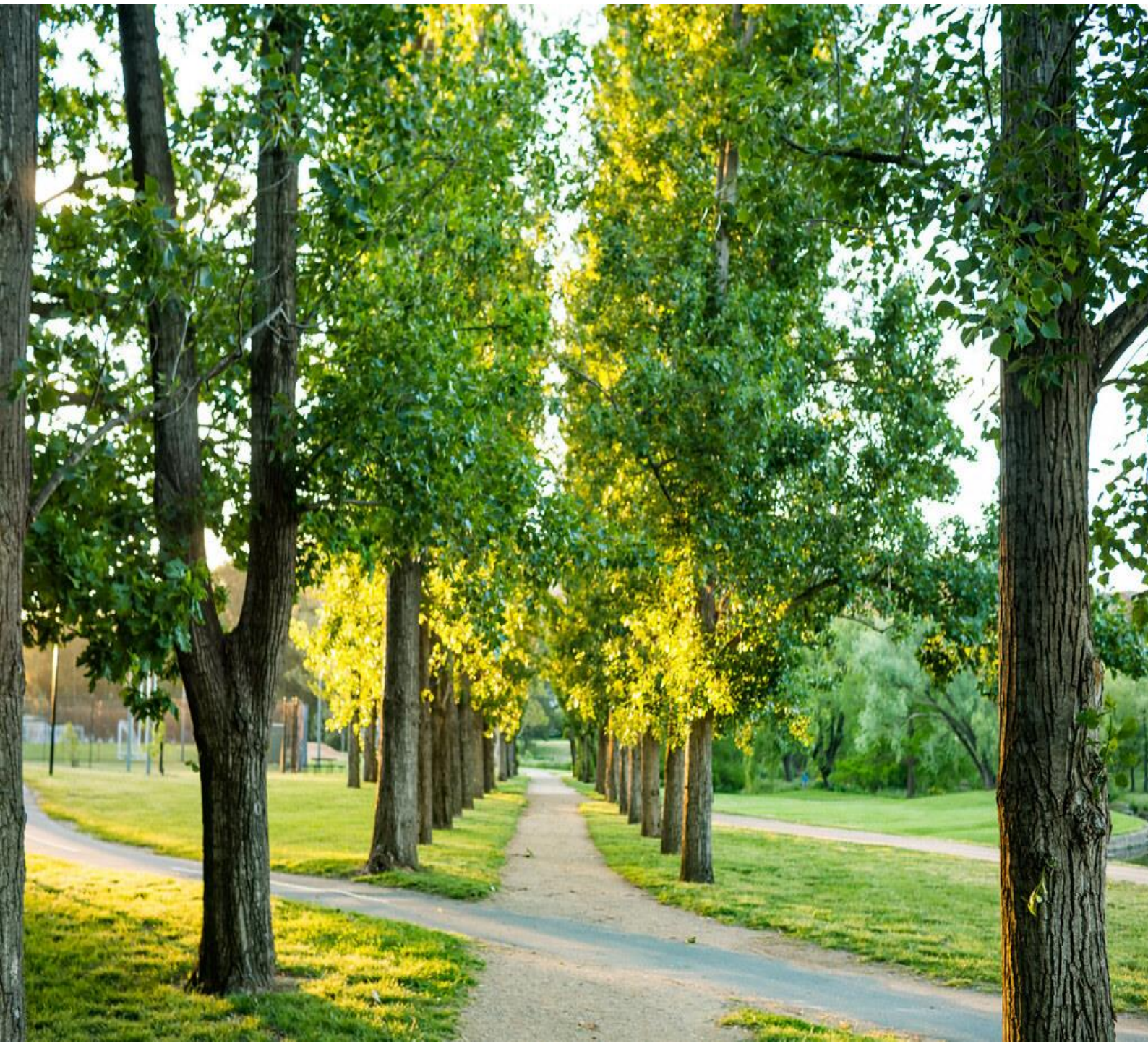

For	Committee Secretary, Select Committee on Tobacco Harm Reduction		
From	Professor Emily Banks	Contact Officer	Professor Emily Banks National Centre for Epidemiology & Population Health ANU College of Medicine Biology & Environment
Drafting	Government Relations	Contact Officer	Government Relations Officer

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1.0	03/11/20	Drafting team, National Centre for Epidemiology & Population Health	Professor Banks
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Summary

Ten key facts about e-cigarettes and smoking, based on the current evidence, aligned with the Terms of Reference

1. Australia is a world leader in tobacco control and smoking continues to decline, including for Aboriginal and Torres Strait Islander peoples; maintaining this progress requires ongoing concerted action.
2. The large majority of people who successfully quit smoking do so unaided.
3. Over time, smokers in Australia are increasingly likely to quit, are increasingly motivated to stop smoking and are finding it easier to quit.
4. There is insufficient evidence as to whether or not e-cigarettes are an effective aid for quitting smoking.
5. Use of e-cigarettes by smokers trying to quit is likely to lead to greater long-term exposure to nicotine than the use of other smoking cessation measures.
6. E-cigarettes are a gateway to tobacco smoking for young people.
7. In Australia, under current highly restrictive e-cigarette access policies, around one-fifth of current daily e-cigarette users are people who have never smoked tobacco.
8. To maintain Australia's world-leading progress on tobacco, it is important to avoid e-cigarette use in non-smokers and to provide evidence-based support for smokers to quit.
9. Widespread availability of products such as alcohol and tobacco, even with regulatory controls, results in extensive and harmful use in groups we are seeking to protect, including young people.
10. The overall health impacts of e-cigarettes are unclear and are in the process of being reviewed in detail for Australia, along with relevant policy options.

Background and approach

This document provides evidence relevant to the terms of reference for the Senate Select Committee on Tobacco Harm Reduction. It draws on work conducted as part of a review of the health impacts of e-cigarettes, commissioned by the Australian Government Department of Health, including content from reports on:

- smoking prevalence and trends in the Australia
- smoking prevalence and trends in the Aboriginal and Torres Strait Islander population
- evidence regarding changes in smoking behaviour with decreasing smoking prevalence, including that relating to the "hardening hypothesis"
- patterns of e-cigarettes use
- evidence regarding uptake of tobacco cigarette smoking in relation to e-cigarette use
- evidence regarding the efficacy of e-cigarettes for combustible tobacco or nicotine cessation.

The next stage of the program of work is to review health outcomes in relation to e-cigarette use and to conduct a public health assessment of e-cigarettes for Australia, including consideration of policy options. Our team will complete this review by the end June 2021.

This submission considers current contextual evidence regarding tobacco and e-cigarette use in Australia, and evidence on the relation of e-cigarettes on smoking behaviour, including smoking uptake and cessation. We have based our findings on systematic and other types of reviews of the relevant evidence from published papers and the "grey literature" (i.e. government and NGO reports, non-peer reviewed reports), using meta-analyses to combine quantitative data, where appropriate. The publicly available relevant reports completed by the ANU and contributing to this submission are referenced throughout the document and listed at the end, with hyperlinks.

Findings of the review of e-cigarettes and smoking behaviour, with reference to relevant Terms of Reference of the Senate Select Committee on Tobacco Harm Reduction

a. The treatment of nicotine vaping products (electronic cigarettes and smokeless tobacco) in developed countries similar to Australia (such as the United Kingdom, New Zealand, the European Union and United States), including but not limited to legislative and regulatory frameworks;

b. The impact nicotine vaping products have had on smoking rates in these countries, and the aggregate population health impacts of these changes in nicotine consumption;

Internationally, the policy approach to e-cigarettes is highly variable, ranging from widespread availability as consumer goods, with large-scale use including by young people, to prohibition.[1] While the proportion of the population using e-cigarettes is related to the treatment and regulation of e-cigarettes and income levels,[1] it is not possible to reliably establish the impact of e-cigarettes on smoking rates by investigating country- or population-level trends, nor it is appropriate. This is because background smoking prevalence is declining in most countries and tobacco control policies, population responses and other factors change over time. It is therefore not possible to know reliably what would have happened to smoking prevalence in the absence of e-cigarettes, except in countries where use is rare.

Australia is a world leader in tobacco control and the prevalence of smoking in Australia is continuing to decline. From the 2019 National Drug Strategy Household Survey, 11.0% of people aged 14 and over in Australia were current daily smokers (equivalent to 2.3M people)—a statistically significant drop from 12.2% in 2016, and following sustained reductions in smoking prevalence over recent decades. These falls were largely driven by younger people not taking up smoking.[2] The proportion of people in the population who have never smoked has increased over time, in adults and particularly among youth in Australia. In 2019, the National Drug Strategy Household Survey reported that 96.6% of youth aged 14–17 had never smoked. The same survey reported that, between 2001 and 2016, there was a five-fold increase in the number of youths who reports as never having smoked.[2]

The majority of Aboriginal and Torres Strait Islander people do not smoke. In 2018/19, 40.2% of Aboriginal and Torres Strait Islander adults reported current daily smoking. This follows substantial continuing significant reductions over the past decade, particularly in major cities and regional areas, and among younger adults and youth.[3, 4]

The substantial majority of smokers who quit successfully do so unaided, for example by going "cold turkey" or cutting down.[5] Declining smoking prevalence in Australia and similar countries has generally been accompanied by increasing motivation to quit, reduced dependency and greater quit rates among smokers; smokers are finding it increasingly easy to quit.[6] In 2010, an estimated 2.0% of the Australian population aged 18 and over were smokers who were unmotivated to quit and had difficulty quitting.[6]

Key fact 1. Australia is a world leader in tobacco control and smoking continues to decline, including for Aboriginal and Torres Strait Islander peoples; maintaining this progress requires ongoing concerted action.

Key fact 2. The large majority of people successfully quitting smoking do so unaided.

Key fact 3. Over time, smokers in Australia are increasingly likely to quit, are increasingly motivated to stop smoking and are finding it easier to quit.

c. The established evidence on the effectiveness of e-cigarettes as a smoking cessation treatment;

We reviewed the worldwide peer-reviewed randomised controlled trials of e-cigarettes for smoking cessation, which provide the most reliable evidence on whether or not e-cigarettes are efficacious for this purpose, and combined the results of the different studies using meta-analyses.[7]

The main finding from the review is that—based on the results of the nine trials that were identified—there is insufficient evidence that nicotine-delivering e-cigarettes are an effective aid for smoking cessation

compared to no intervention/usual care, non-nicotine-delivering e-cigarettes or standard nicotine-replacement therapy, such as patches or gum.[7] Applying standard methods as part of the review, the overall quality of the evidence was rated as low and uncertain: the few trials conducted were generally small, employed a wide range of study designs across diverse settings and the majority had methodological issues indicating a high risk of bias. Some of the results of the meta-analyses varied according to the method used. Our results are consistent with virtually all of the reviews on this topic conducted to date.[7]

Results are promising and highlight the potential for nicotine-delivering e-cigarettes to support cessation. However, more reliable, large-scale evidence is needed as the basis for decision-making. The only trial demonstrating a significant benefit of e-cigarettes for smoking cessation compared to nicotine-replacement therapy was where smokers used the e-cigarettes within medical quit-smoking services, with smokers also regularly seeing a health professional for behavioural support.[8] The trials do not provide evidence that widespread use would support cessation.

The trials also show that nicotine-delivering e-cigarettes may lead to greater ongoing nicotine exposure than other smoking cessation methods.[7] One study found that around 80% of successful quitters randomised to e-cigarettes continued to use them at one-year follow up while 9% of those randomised to other nicotine-replacement continued to use these products.[8]

Key fact 4. There is insufficient evidence as to whether or not e-cigarettes are an effective aid for quitting smoking

Key fact 5. Use of e-cigarettes by smokers trying to quit is likely to lead to greater long-term exposure to nicotine that use of other smoking cessation measures.

d. The established evidence on the uptake of e-cigarettes amongst non-smokers and the potential gateway effect onto traditional tobacco products;

Evidence from three systematic reviews and 25 individual research studies was included. A meta-analysis, which combined the evidence from these studies, showed that never-smokers who had used e-cigarettes were, on average, around three times as likely as those who had not used e-cigarettes to try smoking conventional cigarettes and transition to regular tobacco smoking.[9] All 25 studies found an increased risk of taking up smoking with use of e-cigarettes — the size of that risk varied from study to study.

Overall, the quality of the evidence was rated as moderate.[9] The limited available evidence indicates that former smokers who had used e-cigarettes were around twice as likely to relapse and resume current smoking as those who had not used e-cigarettes.
Among people in Australia aged 14 years and over in 2019,

- 11% had ever used e-cigarettes, most of whom (60%) reported using e-cigarettes once or twice only
- 2.0% (equivalent to 412,000 people) reported current use (daily, weekly or monthly)
- 1.1% (equivalent to 227,000 people) reported daily use, according to the 2019 NDSHS.

Use has increased significantly over the last six years.

Among current daily e-cigarettes users in 2016,

- 32% were also daily smokers
- 11% were non-daily smokers
- 38% were ex-smokers
- 18% were never-smokers.[10]

Hence, an estimated 43% of daily e-cigarette users in Australia in 2016 were dual e-cigarette users and combustible tobacco smokers.

Key fact 6. E-cigarettes are a gateway to tobacco smoking for young people.

Key fact 7. In Australia, under current highly restrictive access policies, around one-fifth of current daily e-cigarette users are people who have never smoked tobacco.

e. Evidence of the impact of legalising nicotine vaping products on youth smoking and vaping rates and measures that Australia could adopt to minimise youth smoking and vaping;

Preventing premature death, disability and suffering from smoking, and maintaining Australia's world-leading progress on tobacco, requires avoiding uptake of smoking in non-smokers and supporting smokers to quit. The current evidence indicates that this means avoiding e-cigarette use in non-smokers, among other things, and providing evidence-based support for smokers to quit. Since e-cigarettes are likely to have different impacts on non-smokers and smokers, these groups need to be considered separately, in terms of evidence and policy measures.

The proportion of people using e-cigarettes varies widely internationally and has increased substantially in many countries over the past decade, particularly among young people. In countries where e-cigarettes are available as consumer goods—such as the United States—use is common, particularly among youth, with recent data showing 10–20% of US high school children report recent use of e-cigarettes.[11-18]

Experience with alcohol and tobacco indicates that there is extensive and harmful use in young people if products are widely available, even with regulatory controls and recommendations about age limits. Hence, avoidance of use in non-smokers would include measures that avoid widespread availability of e-cigarettes.

The next stage of the program of work commissioned by the Department of Health is to review health outcomes in relation to e-cigarette use and to conduct a public health assessment of e-cigarettes for Australia, including consideration of policy options. Our team will complete these by the end June 2021.

Key fact 8. To maintain Australia's world-leading progress on tobacco, it is important to avoid e-cigarette use in non-smokers and to provide evidence-based support for smokers to quit.

Key fact 9. Widespread availability of products such as alcohol and tobacco, even with regulatory controls, results in extensive and harmful use in groups we are seeking to protect, including young people.

Key fact 10. The overall health impacts of e-cigarettes are unclear and are in the process of being reviewed in detail for Australia, along with relevant policy options.

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