

How do people who smoke perceive a tobacco retail outlet reduction policy in Aotearoa New Zealand? A qualitative analysis

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ABSTRACT

Background Aotearoa New Zealand plans to greatly reduce tobacco retail outlets, which are concentrated in areas of higher deprivation and perpetuate health inequities caused by smoking and borne particularly by Māori. However, we lack in-depth analyses of how this measure could affect people who smoke.

Methods We undertook in-depth interviews with 24 adults from two urban areas who smoke. We used a novel interactive mapping approach to examine participants' current retail outlets and their views on a scenario where very few outlets would sell tobacco. To inform policy implementation, we probed participants' anticipated responses and explored the measure's wider implications, including unintended impacts. We used qualitative description to interpret the data.

Results Most participants anticipated accommodating the changes easily, by using alternative outlets or bulk-purchasing tobacco; however, they felt others would face access problems and increased costs, and greater stress. They thought the policy would spur quit attempts, reduce relapse among people who had quit and protect young people from smoking uptake, and expected more people to switch to alternative nicotine products. However, most foresaw unintended social outcomes, such as increased crime and reduced viability of local businesses.

Conclusions Many participants hoped to become smoke-free and thought retail reduction measures would prompt quit attempts and reduce relapse. Adopting a holistic well-being perspective, such as those developed by Māori, could address concerns about unintended adverse outcomes and provide comprehensive support to people who smoke as they adjust to a fundamental change in tobacco availability.

INTRODUCTION

Commercial tobacco endgames aim to rapidly reduce smoking prevalence and address longstanding inequities caused by smoking by reducing the widespread availability of tobacco, 1-3 which normalises smoking and undermines measures designed to reduce its prevalence.4 5 Endgame policies have particular relevance in Aotearoa New Zealand, where Māori (indigenous peoples of Aotearoa) leaders first proposed a tupeka kore (tobacco-free) vision nearly 20 years ago.6 They identified tobacco as a tool of colonisation used initially as a gesture of goodwill and in trade by immigrants, and then by tobacco companies that exploited indigenous peoples as a new source of profit.^{7 8} Māori leaders' call for action resulted in a Parliamentary Inquiry led by the Māori Affairs Select

WHAT IS ALREADY KNOWN ON THIS TOPIC

- ⇒ Modelling studies predict that large reductions in tobacco availability will reduce smoking prevalence and bring pro-equity benefits.
- ⇒ Surveys examining perceptions of tobacco retail reduction policies report support for less extensive measures, but opposition to larger, more comprehensive measures.

WHAT THIS STUDY ADDS

- ⇒ In-depth interviews with people who smoke revealed most expected to accommodate largescale reductions in retail outlets by modifying personal routines and purchase patterns.
- ⇒ Nonetheless, participants foresaw a greater impact on people experiencing higher deprivation and believed the measure could affect these people's financial, social and mental well-being.
- ⇒ Māori models of health and well-being outline approaches that could address concerns participants raised.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Adopting a more holistic view of well-being, such as those developed by Māori, would better recognise the wide-ranging impacts this policy may have and focus more directly on the support required for successful policy implementation.

Committee, which recommended the government reduce smoking prevalence and tobacco availability to minimal levels, ⁹ a goal the government adopted in 2011. ¹⁰ Legislation now enacted introduces denicotinisation (ie, removes most nicotine from smoked products), creates a smoke-free generation (by disallowing product sales to people born after a certain year) and will reduce tobacco retail outlets from around 6000 to 600 nationwide. ¹¹ ¹²

Recent systematic reviews and meta-analyses report associations between greater retailer density (ie, outlet numbers within a given area) and higher smoking initiation and prevalence, ¹³ higher and heavier adult tobacco use, ¹³ ¹⁴ and lower rates of smoking cessation. ¹³ Retail outlet density has also been associated with higher risk of relapse, though fewer studies measured this outcome. ¹⁴ Retailer proximity (eg, the distance between an outlet and individuals' home) was also positively associated with adult tobacco use ¹⁴ and inversely related to



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smoking cessation. ¹³ Studies examining youth tobacco use have reported positive associations between outlet density around young people's homes and smoking, ¹³ ¹⁵ ¹⁶ and between outlet density near schools and future smoking uptake. ¹⁵ Retailer density has been positively associated with adolescent smoking in multiple countries, including Canada, Scotland, India and South Korea. ^{14–16} Associations between tobacco outlet proximity and young people's homes are less clear, possibly because young people's activity spaces expose them to tobacco outlets beyond their immediate neighbourhood. ¹⁷

Researchers have reported greater concentrations of tobacco retailers in lower-income neighbourhoods, rural settings and in areas where some ethnicities are concentrated (often reflecting associations between ethnicity and socioeconomic status, and the consequences of land displacement caused by colonisation). ^{18–22} Though based on fewer studies, higher retailer density and proximity have been associated with higher adult tobacco use among lower-income populations (with greater effect sizes observed relative to high-income populations). ¹⁴ In New Zealand, strong associations between neighbourhood deprivation and smoking prevalence suggest retail density risks entrenching inequities caused by smoking. ²³

A recent simulation-based modelling study in Ohio, USA found different density reduction strategies had varied effects on equity. Capping' (ie, setting a limit on the number of retailers in a certain area) had among the greatest and most equitable impact in more deprived neighbourhoods and was most beneficial for rural neighbourhoods. A nationwide Scottish simulation study found that among 12 policy scenarios examined, restricting sales to supermarkets only and disallowing sales at small local shops produced more equitable outcomes than the status quo. Secondary 25

Internationally, policymakers have taken different approaches to reducing retailer density. Aside from licensing law changes, approaches involve disallowing sales near areas frequented by youth or by some retailers, and capping retailer numbers within a given area. ¹³ ¹⁴ ²⁶ Irrespective of the approach taken, New Zealand-specific modelling found large reductions in retail outlets (eg, by 90% across all 66 local government areas) were required to bring pro-equity benefits. ²⁷

Yet, while these studies consistently report that reducing tobacco availability will bring population health benefits, we know less about its impacts on the people who smoke. Surveys estimating support for retail reduction measures offer some insights, though these typically do not present detailed scenarios or probe impacts on equity or well-being. We thus aimed to inform policy implementation by exploring how people who smoke perceived a proposal combining capping and de-clustering measures. Specifically, we explored participants' current tobacco purchasing practices, and the personal, social and societal implications of greatly reducing tobacco availability. We were particularly interested in implications for Māori, who bear a disproportionate burden of harm from smoking; daily smoking is 20.9% among Māori and 8.5% among European/other. 29 30

METHODS

Researcher reflexivity

As non-smoking health researchers, our life experiences differed from those of our participants; we aimed to create non-judgemental dialogues where participants of all ethnicities and backgrounds could safely share their thoughts. Because the lead researchers (AG-DM and JH) are non-Māori, we worked closely with partners from Te Kāhui Matepukupuku O Aotearoa (New

Zealand Cancer Society); specifically, we conceptualised the project with the Te Kāhui Matepukupuku O Aotearoa Smokefree Issues group, who advised on the study design to ensure our approach respected Māori values and practices. We liaised with this group to recruit participants, discussed the project at monthly meetings and provided drafts of the findings for review by partners.

Sample

AG-DM and JH recruited participants aged 18 years and over who smoked at least five cigarettes per day; recruitment occurred via social media and the community networks of a study advisor. Potential participants completed an online eligibility survey (see online supplemental file 1) and provided details of their age, gender, ethnicity, current tobacco consumption and main tobacco purchase outlets. Our purposive sample comprised 11 Māori and 13 non-Māori participants, to allow us to oversample people most affected by smoking and explore whether Māori and non-Māori differed in their views.

We contacted eligible people by phone to assess their interest and, if appropriate, to book an interview. We recruited participants from Dunedin (a South Island city; population ~114 000) and Hamilton (a North Island city; population ~178 000). We offered each participant a \$40 gift voucher to recognise their assistance. Online supplemental file 2 outlines the recruitment process.

Mapping

Using the 'My Maps' feature in Google Maps, AG-DM created personalised web-based maps that provided an interactive representation of current tobacco outlet locations and a post-policy scenario. Each map depicted participants' current usual purchase locations (participants provided this information in a pre-interview on-boarding survey), all known current tobacco retailers within their city or town, and designated tobacco retail outlets following policy implementation. See figures 1 and 2 for sample maps, and online supplemental file 3 for a detailed explanation of the overall mapping approach.

Interviews

To facilitate participation and manage COVID-19 restrictions, AG-DM and JH conducted interviews online via the Zoom e-conferencing platform, and by phone. We pretested the interview guide with three participants and made minor clarifications. We began all of our interviews with whakawhānaungatanga (relationship building) and, for participants who identified as Māori, we offered to begin (and end) each interview with a karakia (a recitation that creates a shared purpose and brings meeting participants together).

After answering any questions, we obtained verbal consent from each participant and followed a semistructured interview guide to explore participants' smoking history and tobacco access (see online supplemental file 4). We provided each participant with a personalised map via the Zoom screen-sharing function; for phone interviews, we emailed an advance digital copy. Interviews probed how participants perceived and anticipated responding to the proposed policy, which we asked them to assume would limit tobacco sales to selected supermarkets. We explored their thoughts on others' responses and probed perceptions of the policy's wider social implications.

Interviews took place between April and June 2022 and lasted between 37 and 119 min. With participants' permission, we audio-recorded the interviews and used an online program (

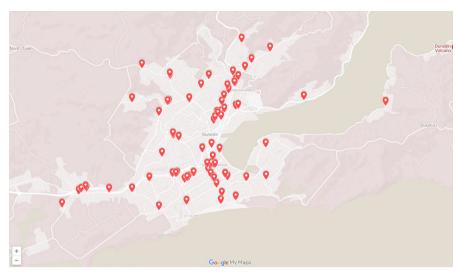


Figure 1 Dunedin sample map using red pins to represent current tobacco retail outlets.

Otter.ai.) to transcribe these into anonymous verbatim records (each participant was assigned a pseudonym). A research assistant reviewed and checked each transcript for accuracy. We reviewed transcripts following each interview to identify data convergence and information sufficiency.

Data analysis

We interpreted the data using qualitative description, an exploratory (and, in this case, inductive) analytical approach that stays close to the data. ^{31 32} We began by reading and rereading transcripts, then independently analysed three transcripts and developed our own coding frameworks using NVivo (V.1.6.2), before meeting to integrate and modify codes where necessary. We independently coded two further transcripts using the amalgamated framework, met to reach a consensus and then met regularly as AG-DM coded the remaining transcripts.

We drew on detailed summary notes, written after each interview, and analytical memos that noted participant or process-related reflections and recurring ideas. Participants received a copy of their transcript and summary notes, and could comment on and correct these (none did). We compared transcripts from Māori and non-Māori participants to explore whether

perceptions varied by ethnicity but found no clear differences and so report findings for the sample as a whole.

Following Sandelowski and others,^{31 33 34} we applied basic counts to indicate how prevalent particular views were among our 24 participants: 'some' corresponds to views held by less than one-third of participants, while 'many' corresponds to views held by at least one-third; 'most' corresponds to views held by more than half, while 'a large majority' signals views held by at least three-quarters of participants. This approach aided consistency and enhanced what Maxwell termed the 'internal generalisability' of findings (ie, the extent to which conclusions are indeed characteristic of a particular sample, though broader inferences cannot be drawn).³³

Our advisors provided guidance and feedback throughout the project, and encouraged us to consider the implications of our findings using Te Whare Tapa Whā, a model based on Māori health principles, which describes well-being as a wharenui (meeting house) comprising four walls.³⁵ These walls represent taha hinengaro (mental health), taha wairua (spiritual health), taha tinana (physical health) and taha whānau (family health). The wharenui's strength and resilience depend on walls aligning and supporting each other,³⁶ and damage to one wall may



Figure 2 Dunedin sample map using green pins to represent potential designated retailers (supermarkets) following policy implementation.

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Table 1 Participant characteristics		
Characteristic	Number	
Age		
18–34	12	
35–50	8	
>50	4	
Gender (total sample)		
Female	15 (7 Māori)	
Male	8 (4 Māori)	
Gender diverse	1	
Ethnicities (identification with multiple ethnicities possible)		
Māori	11	
New Zealand European	16	
Pacific	1	
Current tobacco consumption		
<10 cigarettes per day	7	
≥10 cigarettes per day	17	
Place of residence		
Dunedin within 10 km radius of central location	10	
Dunedin outside 10 km radius of central location	4	
Hamilton within 10 km radius of central location	9	
Hamilton outside 10 km radius of central location	1	

destabilise the building. With our advisors' support, we use this model to consider the varied impacts on well-being our participants noted.

RESULTS

We outline our 24 participants' characteristics (see table 1 below) then present themes and supporting quotes, with a more detailed codebook provided in online supplemental file 5.

Convenience and cost as twin imperatives

Participants overwhelmingly cited convenience as the key reason they bought tobacco from their preferred retailers, which were primarily dairies, discount stores or service stations. A large majority noted that retailers were located within a short walking distance from their home or workplace, and many bought from a retailer along their regular travel route or when buying food, alcohol or petrol. Small outlets offered minimal wait times, easy parking and flexible opening hours.

Cost also figured strongly in participants' comments, and most shopped at an outlet that offered lower tobacco prices (savings of between \$1.00 and \$10.00 were reported per roll-your-own tobacco pouch, though savings accrued per pack were less clear). Some commented on relationships they valued with shopkeepers and wanted to support people they knew and who they felt did not judge them for buying tobacco.

When they first learnt of the retail reduction proposal, most participants anticipated little or no personal inconvenience and expected to purchase tobacco during regular grocery expeditions, or from outlets while en route to town or work. However, people who did not live near a designated retailer, or whose regular routines would have to change to incorporate tobacco purchases, felt the policy would complicate and disrupt their schedules. They raised concerns about fuel costs and the inconvenience of making new travel arrangements. Uri explained: "Either I'll have to walk... further, or start using a bus, or stuff like that... Like, to me, it's just a nuisance, because I don't have a car or any mode of transportation." Some also felt anxious

visiting large supermarkets, where they feared judgement from others or delays in accessing tobacco.

Responding to retail disruptions

Many participants expected they themselves would adjust to the changes by purchasing tobacco in bulk (eg, buying a week's supply at once or increasing their pouch size), yet felt concerned stocking up could lead them to smoke more. Nicolas commented: "You know, a lot of the time I look inside my pouch of tobacco and go, 'Oh... I need to make it last several more days because I don't want to spend the money just yet'. But if it's right there, I'm not even gonna notice. I'm gonna... smoke two weeks' worth in a week and a half." However, some felt cost constraints would limit their ability to purchase in bulk. Tui commented: "I do have a restraint on me as far as that goes. Like, if I run out of cigarettes in a week, well, that's it. You know... I never ever feel good about having to buy a second pack of cigarettes and usually I don't have that money there anyway." Some expected to budget more carefully and monitor their tobacco use to last a full shopping cycle. Whina commented: "I'm a bit of a pre-planner. Before I even run out of cigarettes, I like to make sure I've got another packet. So now it just means for me, that I'd have to budget my cigarettes for the week ...if I'm having to buy them at the supermarket, so I'm not having to keep going back."

Most expected others who smoke to bulk-buy and face similar challenges of increased smoking and greater financial difficulty. Ivan commented: "It's gonna have the complete opposite effect of what people will be trying to achieve" and added: "That's going to put them more out of pocket because they're either gonna be overbuying... or [they'll] substitute, you know, cut things out of their grocery list."

Participants' views evolved as they reflected on the maps outlining changes the retail reduction policy will bring. Although most anticipated they would face few difficulties accessing tobacco, many nonetheless expected to reduce their tobacco use as access became less convenient. Nicolas commented: "You know, because the convenience of it is disappearing... I could make myself think that it's just too much effort, and slowly cut down because of that." Some anticipated health benefits. Elsie remarked: "It would be a really good way for me to cut down... I'm over it. I've been doing it for long enough now. ... I mean, it's disgusting, it stinks. Why do I put something into my body that is harming me? Self-harm, isn't it?"

However, many others felt adamant their own smoking behaviour would not change either because they felt change was not possible or because they resisted change imposed by others. Leanne illustrated the first subtheme when she commented: "You're dealing with an addict. Tell me one meth addict... that actually... gives up because it's difficult [to access]... We need to be realizing that this is not choice. This is addiction." By contrast, Tui explained how people react against perceived coercion and suggested defiance created agency: "You know... we are those sorts of people on that side of the fence... that just purely on principle... go against whatever the social norm is."

A large majority thought the changes could help others who smoke to cut back or quit, especially people already considering giving up. Olivia remarked: "I think if, ah, someone was serious about [quitting]... they can't just nip to the dairy (convenience store) to grab a packet, and they'll sit there and contemplate more: 'Is it worth going all the way down there- yes or no?' Rather than just that quick, split decision to go get a packet and fall back into that trap." They believed the policy would prevent youth uptake. Greta commented: "You might not be able to

change the people 50 plus, but there's plenty of room for change for younger folk coming through. For [whom], you know, it should be totally unacceptable."

Most expected relapse to reduce among recent quitters. Dora commented: "I think it'll encourage them to carry on... [with their quit attempt because of] the effort to get cigarettes." However, many felt people who had smoked long term would find quitting especially difficult, noting these people may sacrifice other purchases to continue smoking. Uri commented: "People are just going to find other ways to get them. It's not going to stop people from smoking at all." Atarangi said: "I know people [who] have smoked fifty years, and they absolutely cannot give it up, they've tried. They sacrifice things... food, power, gas, just to get their tobacco... You know, the younger generation-target them, that's great, but people who have been smoking their entire lives... I think it's extremely unfair for them."

A large majority vaped alongside smoking and thought the policy would increase vaping, given easy access to products and potential cost savings. Atarangi commented: "Everyone I know that smokes also vapes. If tobacco got taken away from them, they've got vaping to fall back on. I think a lot more people will just [vape] instead."

Yet, despite the benefits they foresaw, some felt concerned non-smokers may become more judgemental and reinforce the shame and exclusion they themselves already felt. Rita commented: "It can be a pain when you buy your smokes from the supermarket because they treat you like you're an absolute leper." A large majority believed the policy changes would burden people with fewer resources; they raised concerns about the stress and psychological impact the changes could impose. Greta commented: "I think it will have a big impact on the lower socio economic group... because they're not going to have the same ability to... drive or whatever to get to a supermarket to buy their cigarettes." Olivia noted: "It's just going to impact their mental health and cost them more than it originally would because they paid for a taxi or a bus fare, or, you know, [they went] somewhere else to get it." Some worried that increased financial pressures following reduced supply could exacerbate family dysfunction. Elsie commented: "I mean, it's just gonna [cause] isolation, isn't it? Especially if you're in a relationship that's gotten violent or anything like that. You know, you hide [your smoking], things like that. There'd be a lot of family harm over it. It will create a lot of control."

Social gains and losses

Most anticipated positive social outcomes from the policy changes, including reduced smoking among youth, which they strongly believed would increase young people's independence and overall health. Sofia said: "It's all about the next generation and breaking the cycle, breaking those chains of unhealthiness, you know...it didn't happen during our time, but let's make it better for them."

However, most also expected robberies targeting designated tobacco retailers to increase. Olivia noted: "... places who sell them are targeted for that product, then that's going to all combine into those [designated] locations. So perhaps the risk of being targeted is much higher." Yet, while large stores would require more comprehensive security after the changes came into effect, some thought dairies and other small shops would experience less crime when they no longer sold tobacco.

A large majority felt concerned that smaller shops would lose revenue if they could not sell tobacco, and would potentially close thus reducing community cohesion. Elsie commented: "Typically, if I went into a dairy to buy my tobacco, I would look around for a drink or chocolate bar, or perhaps a lighter... buy some hot food... Yeah, [the policy would have] a huge impact on dairy owners." Leanne explained how local stores cared for community members: "If they see that one of the regulars coming in looks a bit off, they'll ask! They don't just sell a product to which we are addicted, they provide an absolutely critical form of community monitoring."

Many participants felt the policy encroached on their lives; they distrusted government public health motives and thought other social problems (eg, alcohol regulation) should be higher priorities. Whina commented: "The government should mind their business ... not get too carried away with how they're planning on doing this..." Yet, many also supported decisive action to confront an obvious harm. Sofia said: "[It's] going to be good for the next generations... And breaking the cycle... you know, creating a healthier, better world... It didn't happen during our time, but let's make it better for them."

DISCUSSION

Though participants generally disliked intrusive measures that would add complexity to their lives, most foresaw only minor changes to their routines. They expected the policy to protect youth and benefit those trying to quit smoking, but thought people experiencing material hardship and mental ill-health would bear an increased burden.

This ambivalence reflects New Zealand survey findings, which found support for retailer licensing and limiting sales to specific outlets, ²⁸ ³⁷ but opposition to more comprehensive retail reduction measures. ²⁸ Despite smoking's devastating impacts, some people report using smoking to manage difficult life circumstances. ^{38–40} Participants' responses reflected this apparent contradiction; they believed reducing tobacco availability would bring longer-term pro-equity benefits, yet identified short-term risks to people who depend heavily on smoking. Furthermore, though they resented their addiction, some disliked measures that challenged their right to decide whether, when and how to quit smoking.

Evidence of smoking's effects on people's physical, economic, mental and social well-being 41-44 suggests addressing these challenges and realising the tupeka kore (tobacco-free) goal will require holistic models of well-being that go beyond biomedical, health-focused approaches. Most participants expected either to change their purchase patterns or quit, and the latter felt becoming smoke-free would foster taha tinana and taha hinengaro (physical and mental well-being).

However, participants thought people unable or unwilling to quit would experience compounding problems. Changed routines could disrupt taha tinana (physical well-being), create additional stress (beyond the burden of addiction) that affected taha hinengaro (mental well-being) and financial pressure, particularly from increased travel costs, that could undermine taha whānau (family well-being). Managing these pressures would require people who smoke to develop a new equilibrium by quitting, moving to other nicotine sources or displacing other purchases to continue smoking. While earlier studies found that smoking both created and alleviated stress, ^{39 40 45} our findings help explain why smoke-free policies both enable quitting and yet loom as unwelcome threats to people who smoke.

Nonetheless, participants anticipated younger people would build stronger whare in a 'healthier, better world' where tobacco no longer threatened their well-being. Rather than face compounding problems, young people's improved taha tinana

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would enhance taha hinengaro, support taha whānau and build resilience that strengthened taha wairua.

Although we identify tensions that may lead to unintended outcomes, our findings should not be seen as supporting the status quo. Instead, they indicate the need for comprehensive support that recognises well-being as a multifaceted construct and assists people who smoke to quit or switch to other nicotine sources. Focus areas 2 and 3 of New Zealand's Smokefree Aotearoa 2025 Action Plan propose increasing health promotion and community mobilisation alongside expanded stop smoking services. Comprehensive and culturally meaningful support will help assuage concerns we identified, minimise maladaptive responses and foster smoke-free outcomes.

Our study has several strengths, including the use of innovative web-based maps to depict proposed retail reduction changes in a real-world setting. We extend earlier work by exploring a specific intervention that combines capping and de-clustering approaches, ²⁵ rather than examining a general concept. ²⁷ We also offer a more nuanced understanding of ostensibly conflicting responses to retail reduction measures and draw on a holistic model of well-being with relevance to Māori. Our participants' insights enrich earlier survey findings, ²⁸ ³⁷ and highlight the complex and intertwined nature of well-being.

However, as non-Māori researchers, we recognise our perspectives differ from those of some participants, and we may have overlooked some points they made. We tried to mitigate this limitation by working closely with Māori advisors and by using Te Whare Tapa Whā to place our findings within a more holistic model of well-being. Nonetheless, Māori-led research based on Māori epistemologies and methodologies would greatly extend our analyses and other population groups with high smoking prevalence also merit greater research attention. For example, research with Pacific peoples, and people who smoke and manage mental health diagnoses, could probe their views on the benefits and unintended outcomes of retail reduction measures, and explore support they may require.

In addition to generating questions, our study offers new insights into how people who smoke perceive a retail reduction strategy, particularly its potential unintended impacts on well-being. Growing international interest in tobacco endgames gives our findings wide relevance and reinforces how engaging with people affected by endgame policies could identify unintended outcomes and inform policy implementation. The holistic approach we have outlined recognises how life experiences and circumstances influence smoking and the meanings people may assign to it. This knowledge could shape the comprehensive support required to complement large reductions in tobacco availability.

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Contributors JH conceptualised the study in collaboration with the United Tobacco Issues Group (UTIG), whose members represent regional divisions of Te $K\bar{a}$ hui Matepukupuku O Aotearoa, developed the final version of the study protocol and

obtained ethical approval. AG-DM developed the mapping procedure and refined the interview guide. AG-DM and JH conducted the interviews. AG-DM led the data coding and, with JH, developed and refined the manuscript through several iterations. AW provided detailed feedback on the framing, interpretation and use of data from Māori participants. AG-DM is the quarantor.

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Map disclaimer The depiction of boundaries on this map does not imply the expression of any opinion whatsoever on the part of BMJ (or any member of its group) concerning the legal status of any country, territory, jurisdiction or area or of its authorities. This map is provided without any warranty of any kind, either express or implied.

Competing interests None declared.

Patient consent for publication Not required.

Ethics approval This study involves human participants and ethical review was undertaken by a departmental reviewer delegated to assess low-risk applications on behalf of the University of Otago Human Ethics Committee (approval D22/050). Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

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Supplementary File 1: Eligibility Survey		
Start of Block: Default Question Block		
Reducing Tobacco Retail Outlets: Interviews *Eligibility Questionnaire*		
To check whether we're able to interview you, we'd like to ask you a few questions about yourself. Please remember that your responses will be kept confidential and you will not be personally identified in any research reports or publications.		
1. How old were you when you had your first puff on a cigarette?		
2. How old were you when you first started to smoke cigarettes at least once a week?		
3. For about how many years have you smoked at least one cigarette each day?		
4. On average, how many cigarettes do you smoke <u>each day</u> ?		

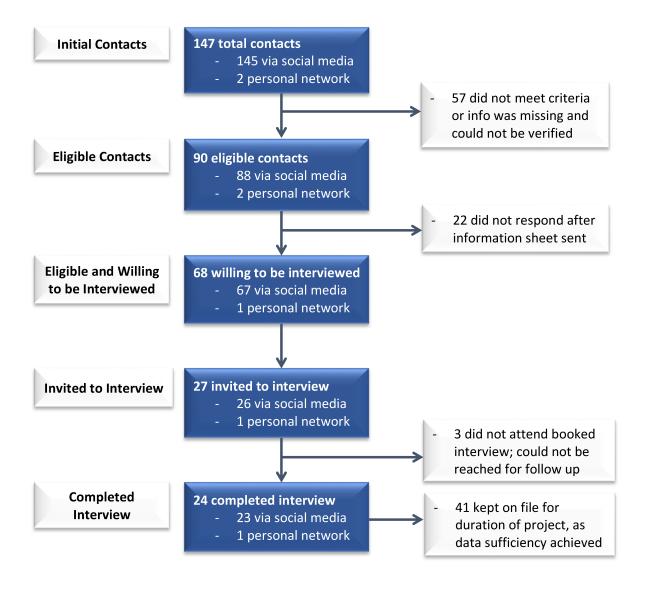
5. How soon after waking up do you have your first cigarette?	
O Within 5 minu	tes (1)
O 6 - 30 minutes	(2)
○ 31 -60 minute	s (3)
After 60 minu	res (4)
These are shops	shops where you currently purchase tobacco? where you would buy tobacco at least once a week. store names, streets, suburbs and city below
Example store:	Four Square, Forbury Road, St Clair, Dunedin
O Main store 1	4)
O Main shop 2 (5)
O Main shop 3 (6)
O Main shop 4 (7)
O Main shop 5(8)
7. Have you ever deli smoke for at least 24	berately tried to quit smoking for at least 24 hours? (i.e., you <u>chose</u> to not hours)
O Yes, within the	e last 6 months (1)
O Yes, more than	n 6 months ago (2)
O No, I have nev	er tried to quit smoking for more than 24 hours (3)

8. If you wish to be interviewed and are eligible, how will you take part in this interview?		
0	By phone - audio/voice only (1)	
	By phone- audio and video (2)	
	Using a tablet (3)	
0	Using a laptop or PC (4)	
	at is your date of birth? mm/yyyy	
10. WI	nich of these do you <u>most</u> identify with?	
0	Male (1)	
0	Female (2)	
0	Gender diverse (3)	

11.		hnic group(s) do you identify with? ick all that apply		
		New Zealand European (1)		
		Māori (2)		
		Samoan (3)		
		Cook Island Māori (4)		
		Tongan (5)		
		Niuean (6)		
		Chinese (7)		
		Indian (8)		
		Other (such as Dutch, Japanese, Tokelauan) (9)		
So	So we can contact you, what is your phone number?			
wh	nat is your	email address?		

What is the best way to get in touch with you?		
C Email (4)		
O Phone (5)		
Thank you for your help with our research		
Please click on the arrow to record your answers		
End of Block: Default Question Block		

Supplementary File 2: Participant Flowchart



Supplementary File 3: Mapping Approach and Sample Maps

We used maps to provide participants with a visual representation of proposed retail reduction changes in their own city or town; the maps functioned as dynamic visual aids that facilitated discussion.

To construct maps, we first identified a central, well-known location about equi-distant from all major suburbs in each of the cities where the vast majority of our participants lived (i.e., Dunedin and Hamilton). Using CalcMaps, we drew a 10km radius around this central point, allowing us to effectively assign cut-off points for locations depicted within the maps.

We then used 'Google My Maps' (a service within Google Maps) to create baseline maps for both Dunedin and Hamilton. Using local online business directories, we added all known current tobacco retailers (within the aforementioned 10km radius) to each baseline map, grouping these together in a map 'layer' (essentially a list) labelled "Current Retailers- All City". We used bright red pins to depict each retailer in this list (84 in Dunedin and 130 in Hamilton). We then added a second layer within each map - "Retailers Post-Changes" – where we identified potential designated tobacco retailers following implementation of the retail reduction policy in each city (three supermarkets in Dunedin and six in Hamilton); we identified these outlets using green pins. Note: At the time the study took place, we discussed post-policy retailer locations with NZ Ministry of Health staff. However, the legislation now enacted had not yet been introduced, thus our maps represented a 'best guess' scenario. Since the Smokefree Environments and Regulated Products (Smoked Tobacco) Amendment Act was passed in late 2022, the government has released maps proposing how retail outlets might be distributed across NZ.[1] These maps (pages 4, 15), on which the Ministry of Health is now consulting, suggest the proposed number of retailers in Dunedin and Hamilton (where

the vast majority of our participants were located) accurately reflected the likely outlet locations.

For each new study participant recruited from Dunedin or Hamilton, we copied their baseline map (using a My Maps feature) and customised it further by adding a third layer within each map, labelled "Current Retailers- Interviewee". This layer contained each participants' current usual purchase locations (i.e., where they reported getting tobacco at least once a week), which we depicted using blue pins.

Google My Maps allowed us to show each map layer (or list) either separately or in combination with other layers by simply toggling these on and off. We could thus compare and contrast current and future retail landscapes more effectively than if we had used static map images. We purposefully applied bold, contrasting colours to our map pins (red, green and blue) as a visual aid to clarify the different outlet types. Where space allowed (i.e., in second and third map layers), we displayed name labels alongside each retailer to support recognition of usual outlets. In addition, we modified the overall look of our maps to enhance the visibility of location pins (this editable feature in My Maps allowed typical Google Map features to be muted or turned off altogether, thus simplifying viewing).

Most interviews were conducted online (via the Zoom e-conferencing platform), while some were conducted by phone. During online interviews, we showed participants their personalised map via the screensharing function within Zoom (for phone interviews, we emailed participants an advance digital copy of their map). Upon opening each participant's map, we first oriented them to what they were seeing (we began in each case by toggling OFF all three map layers, so that they saw with a simple baseline view of their city or town). We

familiarised them with the map by using our curser to point out key areas of the city (these areas had been agreed on in advance and did not change from participant to participant). We asked each person if they wanted us to point out any more key locations to help them get their bearings; we also offered each person more time to look at the map if they felt this would be useful. Participants quickly oriented themselves and none required further time to accustom themselves to the maps.

Once participants indicated that they were comfortable with the map, we used these to facilitate discussion about their own usual purchase locations (where they buy tobacco at least once weekly); their impressions of how the tobacco retail reduction policy would impact them, personally, and their impressions of how the policy would impact other people who smoke.

To explore their usual purchase locations, we toggled ON the map layer labelled "Current Retailers- Interviewee", to show each participant's current usual purchase locations (indicated with blue pins). See Figures S1 and S5 below. We hovered over each pin in turn, circling it with our curser and naming the retailer it represented. One by one, we asked participants about their reasons for purchasing from that specific location, using the map to facilitate discussion.

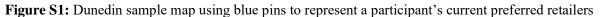
We probed participants' views on the impact fewer retailers would have on them personally by toggling OFF the map layer labelled "Current Retailers- Interviewee" and toggling ON the layer labelled "Current Retailers- All City". This latter map used red pins only to depict all known current tobacco retailers in a participant's city (mainly dairies, service stations, liquor stores and supermarkets; this map included retailers participants had identified as their usual

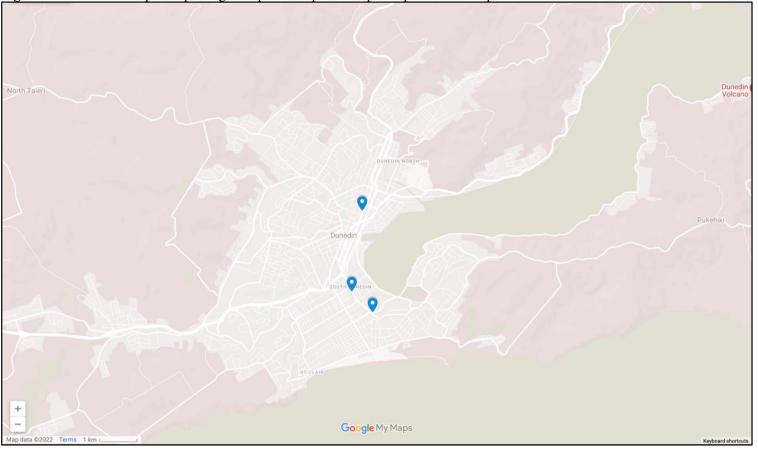
tobacco sources). See Figures S2 and S6 below. Once we had oriented participants to the status quo and checked they understood what they were seeing, we toggled OFF the map layer labelled "Current Retailers- All City", and toggled ON the layer labelled "Retailers Post-Changes", which used green pins only to depict potential designated tobacco retailers (supermarkets) following policy implementation. We had identified supermarkets as potential post-policy designated outlets following discussions with the Ministry of Health. See Figures S3 and S7 below. We outlined the proposed policy changes (to the extent possible at this time) and explained what the map showed. We checked if participants wanted to see a 'before and after' view again (i.e., current retailers vs proposed changes) or view both layers alongside each other (i.e., current retailers and proposed changes). See Figures S4 and S8 below. We then explored how they thought the policy changes would impact them personally.

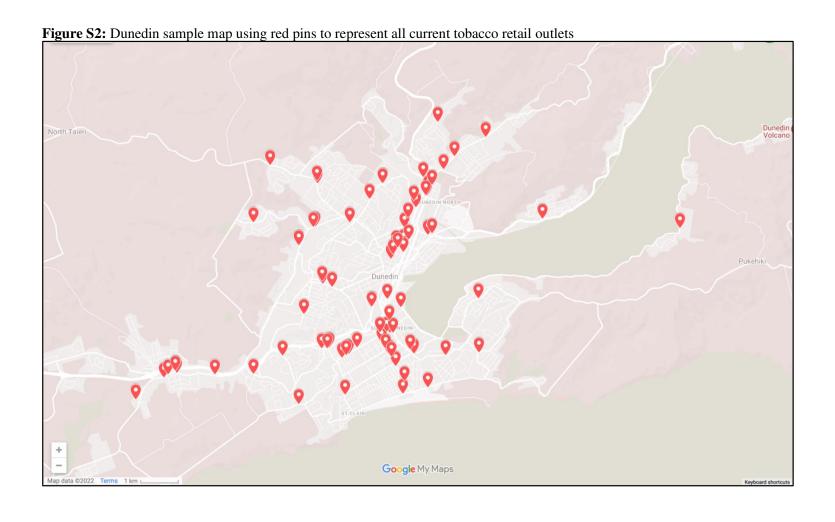
To probe the wider implications a retail reduction strategy would have, we again showed participants the status quo vs the proposed changes, as described above (i.e., toggling between "Current Retailers- All City" and "Retailers Post-Changes"). After checking participants understood the maps, we explored how they thought the policy changes would impact other people who smoke.

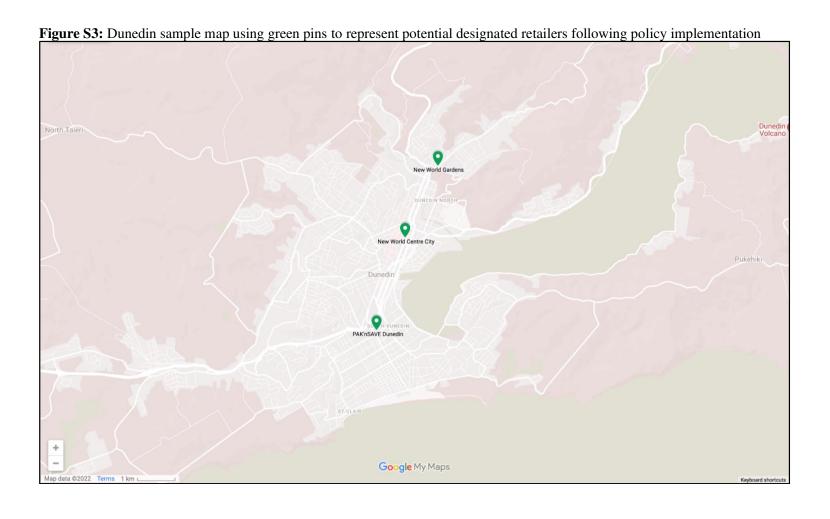
The maps were a very helpful tool to illustrate the extent of the proposed policy changes and facilitate discussions about the impact these would have. Many participants referred to their map during the interview to re-orient themselves and facilitate their thinking as they reflected on the questions we posed. For example, some asked us to zoom into specific areas of the city (e.g., their neighbourhood or another outlet from which they purchased tobacco) so that they could better visualise current retailer density in relation to the proposed changes.

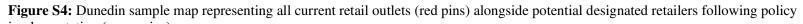
Dunedin Sample Maps

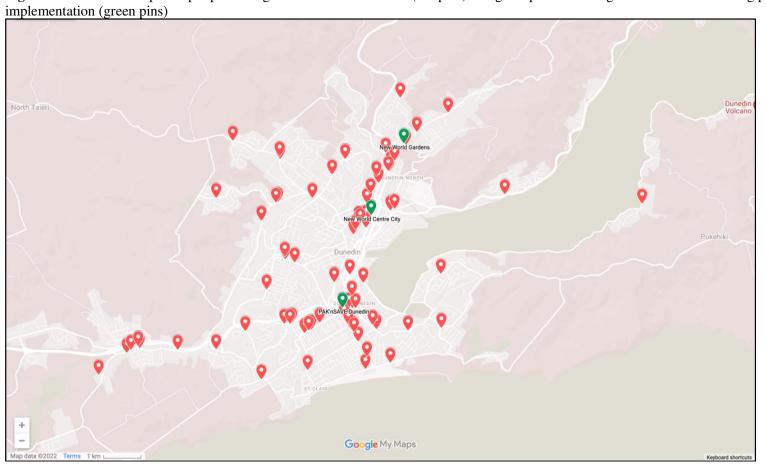




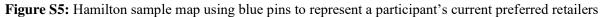


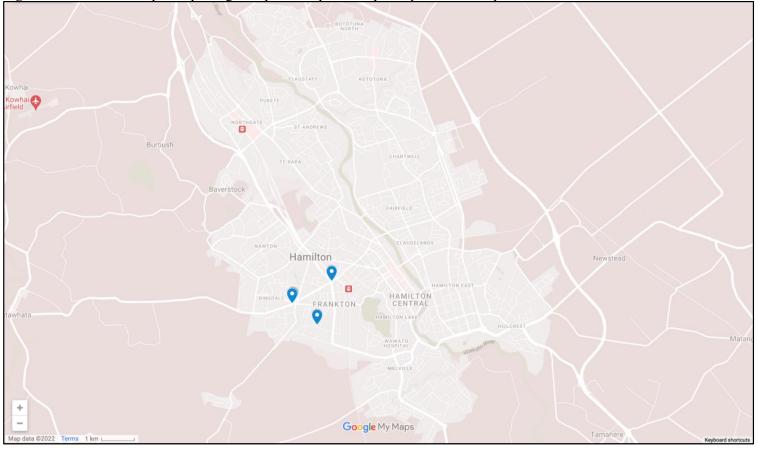


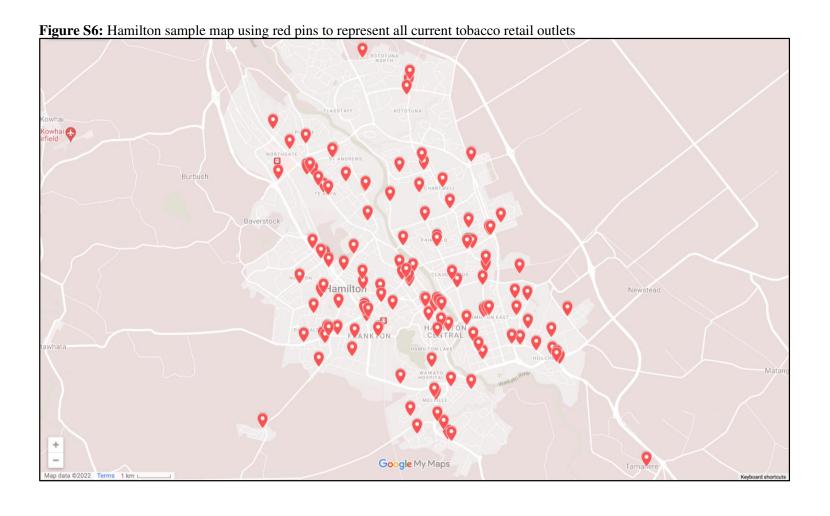


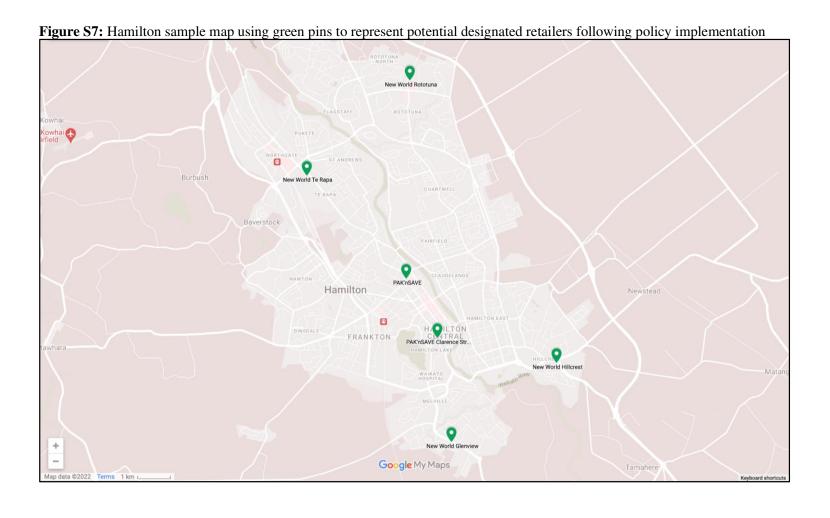


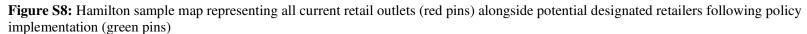
Hamilton Sample Maps

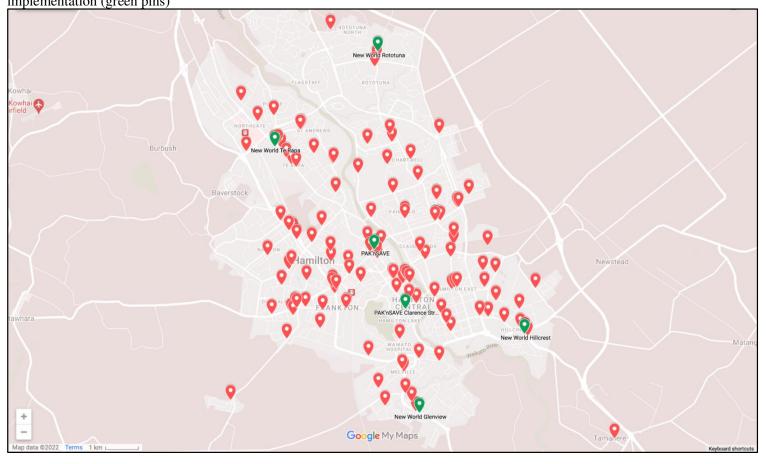












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Supplementary File 4: Interview Guide

Introduction

Hello I'm [interviewer name]; I arranged to meet with you to talk about how people who smoke might respond to a reduction in the number of tobacco retail outlets.

Interviewer personal introduction as appropriate for participant (may be modified depending on prior phone discussions).

Would you like me to open our meeting with a karakia? Proposed karakia to open discussion (if participant answered Yes):

Whakataka te hau ki te uru
Whakataka te hau ki te tonga
Kia mākinakina ki uta
Kia mātaratara ki tai
E hī ake ana te atakura
He tio, he huka, he hau hū
Tīhei mauri ora!

Before we start I'd like to remind you about your rights as a participant in the research project. We have gone through the information sheet with you when we phoned to see if you had any questions about the study. Are there any questions that you'd like us to answer now? Here is a copy of the consent form; please take a few moments to look through it. Before I go through the consent form, could I please turn on the audio recorder? I am using the record function on Zoom and an online transcribing package called Otter.ai.

Screen share consent form and outline key points with interviewee; ask if they have questions and address these.

While the recorder is running, I need to go through some key points with you:

- Your participation in the project is entirely voluntary and you can withdraw from the project at any time up to or during my interview. You have the right to ask questions at any time; if there is something that is not clear, please tell me and I will do my best to answer your questions.
- We will destroy personal identifying information including your contact details and the audio recordings will be destroyed at the conclusion of the project. We will keep the transcripts for at least five years.
- This project involves an open-questioning technique; that means we haven't determined all the questions ahead of time and some of these will depend on how our conversation develops. You always have the right to decide if you would prefer not to answer some questions, so if we come to a topic you don't feel comfortable discussing, please let me know and we will move on.

- You also have the right to stop the interview and withdraw from the study at any time up until the point the interview ends. If you decide to withdraw from the study, there is no penalty.
- We will offer you a \$40 gift voucher to recognise your time and assistance. The project is funded by the New Zealand Cancer Society and there will be no commercial use of the data obtained.
- We aim to publish the results of the project and present these at meetings; the University library will have a copy of any published work we prepare and we will send a copy of your interview transcript and interview summary. We will also send you a summary of the overall project findings. We will use our best efforts to keep your responses confidential to members of the research team named on this sheet.

Do you have any questions before we get started? Please remember that you can ask me questions at any time during the session.

Can you please confirm that you consent to take part in the interview? (ensure consent is recorded) if you are willing to participate, please say "I consent to take part in the interview".

We are offering everyone a \$40 gift voucher to thank them for contributing to our work. Could you please let me know if you would like a voucher from Farmer's or Bunnings?

Personal smoking

- 1. I'd like to start by asking about when you first started smoking. You indicated that you were ___ years old when you had your first cigarette? What was it like? Where did you get the cigarette from? Who were you with? Where were you?
- 2. You said you were ___ years old when you first started smoking at least weekly. When did you start smoking every day? What was it about smoking that led you to smoke more often? Do you smoke RYO (roll your own) or TM (tailor made)?
- 3. Thinking about your smoking now, you said you smoke around __ cigarettes each day. Does your smoking ever go up or down? When do you find it goes up? And down?
- 4. You said you had [insert details of quitting].
 - What prompted you to try and quit? How did you go about trying to quit? What sort of things do you think would make it easier for you to quit?
- 5. What do you hope will happen with your smoking in the next few years?

Sourcing tobacco – current situation

- 6. I'd now like to ask you some questions about where you get your tobacco from. About how often do you buy a pack/pouch?
- I'm going to share my screen with you so that I can show you a Google map of your town.
 [To start, all lists should be ticked OFF in the map legend. Only the base map should be visible]

Please look at this map on your screen. To begin, I'm just going to show you around for a moment, to help you get your bearings. Here we can see the peninsula; moving left we can see the harbour coming in towards South Dunedin and the downtown; this area here is South Dunedin; the downtown area is up here, including the Octagon right here; and North Dunedin is up in this area.

Now, I'm just going to make a slight adjustment to the map.

[Tick ON the list labelled 'Current Retailers-all City' in the map legend]]

You'll see now that we've used red pins to mark most of the retailers that currently sell tobacco in Dunedin. I'll give you a minute or so to take a look. If you have any questions about what you're seeing, please let me know.

[Pause, allowing participant to look. Probe further to help with orientation]

- To help you get your bearings, would you like me to point out any more key locations around the city as points of reference on the map?"
- Would you like more time to look at the map? [Pause to review map further, if requested]

Now, I'm going to highlight ONLY those places where you normally buy your cigarettes or tobacco. These are the stores you told us about in the survey you filled out for this study. [Tick OFF the list labelled 'Current Retailers-all City' in the map legend. Tick ON the list labelled 'Current retailers- interviewee']

Let's just go through these one by one. Looking at this store [name first store from on-boarding survey, hovering over it with curser and letting participant know that you are doing this]:

What are the main reasons you get your tobacco from this store? [If necessary, probe further re. how that particular outlet fits into their routine, and the time it takes to reach the outlet from wherever any reference point(s) might be that they've specifically mentioned]

What about ____? [repeat until all stores mentioned have been explored]

[STOP screen sharing with interviewee for the next two questions; map will be re-introduced in the following section]

- 8. Aside from buying from shops, are there any other places you get cigarettes from? Pause for participant to respond. Follow up by probing all options not mentioned.

 Have you ever bought tobacco online? Have you ever tried to grow your own tobacco? Have you ever bought tobacco from someone selling on the street or from a private home? What about from a market or other community venue?
- 9. What makes you go to those sources/places for tobacco? Do you buy the tobacco, or is it given to you? How easy is it to get tobacco from [relevant non-retail source]? How often do you go to xxx? What about xxx...?How much does it cost compared to buying from your regular shop(s)?
- 10. Do you know of any other ways of getting tobacco? Can you tell me about those? Have you ever used those sources? What made you try that source?

Sourcing tobacco – future policy situation

[Google map to be shown again via screensharing. Tick ON lists labelled 'Current Retailers-all city' and "Current retailers- interviewee"]

I'm now going to share my screen with you once again.

Here, you can see the same Google map of your town that we looked at before. We've used red pins to mark most of the retailers that currently sell tobacco in Dunedin. We've also used blue pins to highlight the places where you normally buy your cigarettes or tobacco, with store names written alongside them. I'll give you a moment to take a look. If you have any questions about what you're seeing, just let me know.

11. I'm now going to ask you what you think about a government policy that will greatly reduce the number of tobacco retail shops in your town and across the country. The details of this policy plan haven't yet been released, but the number of tobacco outlets throughout the country could drop from around 8000 to around 500. It's likely that very few dairies and petrol stations will still be able to sell tobacco.

So, at the moment you can buy tobacco from the stores you've indicated. Once the new policy is introduced, however, only a small number of stores will sell tobacco.

I'm now going to show you an example of what this policy change might look like in Dunedin.

[Tick OFF lists labelled "Current retailers- all city" and "Current Retailers- interviewee". Tick ON list labelled "Retailers post-changes"]

Now we've tried to show what the new policy might look like. This time we've used green pins to show the possible number of stores you'll be able to buy tobacco from in Dunedin after the policy comes into effect.

[CHECK: Does participant want to see before and after again? Would they like to see current retailers alongside the proposed changes? Do they have any further questions about what they are seeing?]

- 12. What do you think of this change in the number of shops selling tobacco? What do you think about the restricting the type of shops allowed to sell tobacco to just NN in your area? [personalise for each participant depending on location]
- 13. If tobacco is taken out of dairies and service stations, what sort of stores do you think should sell tobacco? What makes you think these would be suitable stores for selling tobacco?
- 14. If only a few stores sell tobacco in your town, how would you feel about that? How would you adjust to the changes? **Probe:** Change where you buy tobacco? Look for people selling tobacco on the street? Grow your own? What other things would you consider doing? How easy or difficult would it be to make those changes?
- 15. How do you think having fewer stores selling tobacco would affect the amount of tobacco you normally buy at a time? **Probe:** do you think you might purchase less, purchase more, plan/save for purchases, group buy, bulk buy? How would these changes affect your financial situation? How do you think you would handle that change?
- 16. Would having fewer stores selling tobacco affect how often you smoke? **Probe:** Would you smoke more, less, or about the same? **If change noted, ask:** how would that affect your daily smoking pattern? What effect would these changes have on your experience of smoking?
- 17. To what extent would having fewer places selling tobacco get you thinking about quitting? Or trying to switch to vaping?

Now, I'm going to ask you a series of questions that relate to <u>other</u> people's smoking behaviour. Please disregard the map for a few moments while I make a couple of changes.

[In the map legend, tick OFF the list labelled 'Retailers post-changes'. Tick ON list labelled 'Current Retailers-all City']

Please look at the map on your screen. Once again, you're looking at most of the retailers who currently sell tobacco in Dunedin. These are indicated with red pins.

[Tick OFF the list labelled 'Current Retailers-all City'. Tick ON the list labelled 'Retailers post-changes']

And once again, here is an example of where people could buy tobacco in Dunedin once the new policy comes into effect. Again, we've used green pins to show the possible number of stores selling tobacco after the policy is introduced. [CHECK: Does participant want to see before and after again? Would they like to see current retailers alongside the proposed changes? Do they have any further questions about what they are seeing?]

18. How do you think having fewer stores selling tobacco might affect other people who smoke? [purchase locations, purchase quantity and financial impact, amount smoked, quit attempts...]

- 19. How do you think the changes might affect people who are thinking about quitting? What about people who have recently stopped smoking within the last few weeks or months? Or people who stopped smoking a year or more ago? How do you think these changes might affect people's willingness to try vaping instead of smoking?
- 20. How do you think having fewer stores selling tobacco might affect young people who want to try smoking? What about young people who have already started smoking? How do you think these changes might affect young people and their willingness to vape [check for impact on never smokers and current smokers]?
- 21. How do you think having fewer stores selling tobacco might affect the way other people think about people who smoke? Probes: How do you feel about that? What effect would having fewer stores selling tobacco your perceptions of smoking? Are there any other ways you think you might be affected?
- 22. Do you think having fewer stores selling tobacco could lead to any unintended outcomes? What do you think these would be? How would these affect you? What would you do to respond? What do you think other people who smoke would do?
- 23. Some groups have commented on these changes. A group representing some dairy owners has said that tobacco sales are essential to their businesses and that if they couldn't sell tobacco, they would go out of business. What do you think of this argument? What do you think could be done to help dairies and small businesses transition away from selling tobacco?
- 24. Some research from Aotearoa New Zealand has found that tobacco and cigarettes make up only a small percentage of the purchases people make at dairies and the researchers have questioned dairy owners' concerns. Does this research affect how you see dairy owners' arguments? In what way?
- 25. The dairy owners' group also claim that restricting the sale of tobacco will lead to a bigger black market controlled by gangs. What do you think of this argument? How big a problem do you think black market tobacco will be? How could black market tobacco be better controlled?
- 26. Some people think it's important that the Government introduce policies to improve people's health but other people think the Government should stay out of people's lives and some people don't really care. What are your thoughts?
- 27. Are there any benefits to these changes that we haven't talked about yet? Can you tell me about these?
- 28. Are there any negatives we haven't talked about yet? Can you tell me about these?

Summary

29. These are all the questions I wanted to ask you. Do you have any other comments you'd like to make? Is there anything we haven't discussed that you'd like to comment on?

If meeting began with karakia please note:

Thank you again for making time to share your ideas with us. I'd like to close our meeting with a karakia:

Unuhia, unuhia Unuhia ki te uru tapu nui Kia wātea, kia māmā, te ngākau, te tinana, te wairua i te ara takatā Koia rā e Rongo, whakairia ake ki runga Kia tina! TINA! Hui e! TĀIKI E!

Supplementary File 5: Codebook

Convenience and cost as twin	imperatives
Current preferred retailer determined by convenience	Atarangi: "The dairy is sort of where I go get my bread and my milk and stuff, if I need cigarettes, often I'll pick them up at the same time. Yeah, it's close, I'm literally around the corner from it."
	Elsie: "It's the first shop I come to it's just a couple of minutes down the road."
	Leanne: "It's actually one block from me. So I can walk there and sometimes I pick up my tobacco on Monday when I'm passing with the dog. I can pop in and collect when I'm filling up with petrol."
Current preferred retailer	Jake: "Compared to everywhere else that you can buy tobacco from they're two of the cheapest places."
determined by cost-savings	Rita: "I can buy my smokes, papers and filters for \$65 there. Yeah if you go to BP or to Z, it's probably \$70-ish."
	Sofia: "So, if I'm running a bit likeon a budget because they have, they sell cheap cigarettes down there. So, if I'm running a bit low on cash I'll go [there]."
Expectation of no (or minor) personal inconvenience in response to policy change	Nicolas: "I don't think I'd have to make many changes. I probably would make a specific time to go to the supermarket, you know I'd go when it's least busy, just so I could get in and get out. You know, because I'm gonna have to line up behind people But yeah, I feel like I'd have to change, like, little aspects. Little things."
	Pablo: "Yeah, well it doesn't matter for me, I can just walk down there and get some."
	Rita: "I mean, I shop at New World and PAK'nSAVE, so it's not going to really affect me because I'll just have to make sure that I get [tobacco] in my shopping."

Sofia: "My perspective, I don't mind New World is just not far from me, about a five minute drive	
But the thing with these places is that their tobacco and stuff is probably gonna be more expensive than	
the other shops around, the dairies especially."	

Expectation of considerable personal inconvenience in response to policy change

Amelia: "Yeah, it [would] be very, very challenging, I think. PAK'n'SAVE is quite a busy place in general anyway. I try to avoid it as much as possible. It's not very often I go [there]."

Olivia: "I'd have to drive a long way. Like [now] I just nip up there... you know, supermarket parking is a nightmare anyway... I'm not going to drag my kids halfway across the city, over to a busy carpark, line up, just for a pack of cigarettes. Like, it's just annoying."

Uri: "Either I'll have to walk... further, or start using a bus, or stuff like that... Like, to me, it's just a nuisance, because I don't have a car or any mode of transportation."

Vera: "Well it'll be the whole travelling, and the distance of travel. And the price of gas these days has been so hectic. Who wants to be, like, constantly travelling back, just to buy one packet or something?"

Responding to disruption in the retail landscape

Bulk-buying anticipated in response to policy change

Amelia: "I'll have to potentially... buy in bulk, so I don't need to go every couple of days to PAKn'SAVE... I guess I'd have to do it fortnightly because I get paid fortnightly."

Sofia: "I think these changes will impact the more... lower income people, beneficiaries... I think I can probably see that they would... be doubling up on cigarettes each time they go. [Instead of] getting one packet, they're probably getting two or three, you know, to last them till their next payday."

Olivia: "I'd just, you know, maybe put out X amount each day. Because you don't think so much now... if you run out, you just go get more. Because it's easy, it's right there. So I guess maybe if I had to go all the way down there and line up [to purchase tobacco], I'd probably buy X amount for the week."

Uri: "Some people... may feel more inclined to buy cheaper. Instead of buying... like, more expensive brands, [they'd] start buying, you know, multiple of the cheaper ones."

No anticipated change in tobacco purchase quantity	Leanne: "I'm an addict. I've needed a packet of tobacco ever since I shifted to that. I'd smoke 20 cigarettes a day and I get you know, that number out of a packet per week."
	Tatiana: "It's not gonna phase me or change any of my habits because I go there twice a week anyway. And I told you I buy a packet in the beginning of the week [and] at the end of the week."
Budgeting to maintain tobacco supply in response to policy change	Sofia: "It probably would put a strain on my budget. I would have to you know, think about my budget when paying for cigarettes from those places."
Cut-back or quit attempts likely to be facilitated by policy change (and reference to	Bryan: "I thought that if they reduce it down to that amount [of shops] it's gonna make a lot of people think twice about it I want to be healthy myself. And I know that smoking is dragging me down."
anticipated health benefits as a result)	Elsie: "Well, it's probably a good thing for people that are thinking about quitting. It's another reason to not do it, isn't it, if you have to go further away to get it?"
	Fabien: "I think should help a lot of people to quit, yeah, because people might not be able to get into town and stuff like that to go buy smokes."
	Greta: "If they were already considering it, I think, you know, that may well be the factor in terms of actually quitting." She added: "You might not be able to change the people 50 plus, but there's plenty of room for change for younger folk coming through. For [whom], you know, it should be totally unacceptable."
	Harriet: "People who have disabilities or low immune systemsyou don't know who you're smoking around you don't know, like, who you're breathing that onto."
	Nicolas: "It might be that nudge they need. You know, [it] might be the final decider that they're going to quit."
	Sofia: "I feel probably it'd be a good impact because you can't just say 'Oh, there's a shop down the road, I'll just go and get me some smokes'. You know, you've got to travel that distance and they're

	probably thinking, 'Well, no, I'll give it a trial, see how I go for another two hours.' And then that day will pass and [they'll] go 'Oh, well, I'll try for a whole day'. It'll encourage them to, ah, quit smoking."
Relapse risk likely to be reduced by policy changes	Fabien: "It would stop them from being tempted to go back to smoking."
	Steve: "I definitely think that will help because now that temptation isn't there. Like if they could just pick it up around the corner, and now they can't, maybe they'll be like, 'Oh, yeah, this is a sign. I do need to give up.' I think it's mostly gonna be a kind of internal reflection when these policies come through. It's really going to make people re-evaluate do I really need this to survive?"
Increased use of other nicotine sources in response to policy	Pablo: "Heaps of people smoke vapes Yeah, I think it will it'll explode."
change	Rita: "I think more people will vape. Everyone that I know wants a vape, or is looking at getting a vape."
	Sofia: "For the next generation I reckon it's gonna be all about vaping. There'll be less cigarettes, and it'll be harder for them to buy."
	Uri: "You can still buy vapes at every single convenience store around. And [they're] cheaper as well."
Increased risk of judgement and stigma in response to policy change	Bryan: "It will probably make me more likely to give up because I don't want to be perceived as being the outsider or, you know, separate from a social situation."
· · · · · · · · · · · · · · · · · · ·	Olivia: "I guess it's a little bit of embarrassment because there's so much more emphasis on how bad smoking is I feel a little bit, like, predisposed to their judgment. It could just be my anxiety but I don't want people to think that about me."

Expectation of no (or minor) effect on personal experience as a person who smokes	Nicolas: "I've never really gone and thought about what other people think of the fact I smoke. You know, obviously I carry a pack of mints with me but I don't feel dirty because I do it."
a person mie smenes	Rita: "Doesn't really affect me I suppose. I've spent so much [time] over my last six months working on me, and stopping worrying about what other people think, that I can't worry about them."
	Steve: "Oh honestly, I don't really care. I always get judgment and that for being a smoker but it's, you know, nothing off my back. I don't mind."
Policy change will place disproportionate cost burden on people who are less well-off financially	Elsie: "Yeah, I think it will impact poor people more than it will impact well-to-do people. It won't make any difference to them When you get paid your benefit, what's the first thing you're going to go and do?So, some of those people that live further away from supermarkets [will] probably spend less money on things so that they can get cigarettes."
	Sofia: "Thinking about the lower income people who would find it very hard to, maybe, afford these cigarettes because yeah, you wouldn't be getting discounts and stuff like the cheap cigarettes. Whereas [if] they went to the dairies, they would be able to afford it. You know, they'd have that budget to buy cigarettes."
Policy change will place disproportionate burden on people with limited access to	Greta: "I think it will have a big impact on the lower socio-economic group because they're not going to have the same ability to, you know, drive or whatever to get to a supermarket to buy their cigarettes."
transport	Sofia: "And it'll be just harder for them to get to these places, as some of them might not have transport to get to these main shops. It'll be a lot harder for them, because you know, some of them, may not have bus fare or, you know, they may need to walk to these places and the distances."
Policy change will place disproportionate psychological burden on those unable to give up (i.e., increase stress)	Atarangi: "It will stress me out. (laughs) It would absolutely terrify me and when I get into those sorts of states, I will sit here and I'll just smoke and smoke and dwell and think about things The thought of giving up, like oh my gosh It's definitely the whole mental side of things as well. Knowing that I'm not going to have something like this for myself. Smoking's just for me I'm having a rough day and I'm on the verge of tears with my kids, I come outside because they know when mums outside, I'm having a break. And the whole mental aspect is I'm terrified trying to take that away is quite scary for me."

Maria: "I think, you know, people like that with mental [health issues] ...they'll be needing that extra support, people that are easily stressed and whatnot."

Social gains and losses

Reduced smoking among youth

Bryan: "People not having to worry about having their kids being able to readily obtain tobacco will be a good thing." He added: "If they're only selling from designated supermarkets, you're probably going to have a lot more stringent ID-ing or like security measures in place as opposed to the local corner dairy."

Elsie: "I think if they just make it supermarkets, they'll probably introduce even firmer rules around the sale of them. ...I think it will make it harder for people to buy them." She added: "Some of these dairy owners would rather make the sale than ask about the age restriction."

Greta: "I think sometimes it's easy for dairies to sell to younger folk."

Rita: "It's pretty hard to get stuff in the supermarket without ID... they're really strict."

Vera: "I just think it will just [give youth] more of a chance ...to make up their own minds. It'll be like freedom of choice that way."

Increased crime targeting designated retail outlets

Ivan: "Robberies or stuff like that... you know, it's all going to be targeted on a centralised location."

Nicolas: "You know... people already can't afford cigarettes. That's why there's a decent amount of crime with, you know, ram raids... holding up gas stations and stuff. I would look at the risk of... there's at least 50 to 70 people in a supermarket at all times, right? And you have a couple of people come in at any given time of day, holding up the place to get cigarettes. You're gonna have a lot more people in danger. You know, it's going to be... not an easier target, but a bit more worrying."

Pablo: "The shop owners, they all get smash and grabs... They get robbed all the time, the shops up here, for cigarettes. [It would be] better for the shop owners."

Reduced viability of dairies and other small retailers

Greta: "They're gonna lose sales of other products." She added: "I think that's quite sad because... little family businesses are going to collapse."

Olivia: "Well, I think it's sad for small businesses, because... there's a small profit margin in tobacco. But... you'll buy a drink or a candy bar or a pie... and I think that's where they benefit from being able to sell those products, by the extra purchases. As little add-ons, you know, the little counter grabs that they set up to lure you in... things like that. So, I think if people aren't there to buy the tobacco, they'll lose sales on other products." She added: I don't think that it will impact them into liquidation or anything crazy, but I do think it will affect their sales quite a lot."

Rita: "If I didn't go to the dairy to get my smokes, then I'm not going to buy my milk from the dairy. I'm not going to buy my bread, and all my lollies or, you know, if I want a treat, or ice cream, I'm gonna get it from the supermarket. If other people are like that, it's going to put these small businesses out of business, and that's really sad." She added: "But yeah, I'm not gonna go into a dairy for those sort of things if I'm not going in to get smokes, because you do pay a little bit extra when you go to the dairy. But it's a convenience thing, you know."

Sofia: "It's the cigarettes that draw a lot of people to these ... dairies. You know, they're probably thinking, 'Oh well, if I'm gonna get some smokes, I might as well grab a bread ... a milk, and maybe some lollies for the kids.' But if they have to travel to the supermarket ... it's cheaper there ... you know, you can get a few more items from the bigger stores while you're there. So, probably, it will cut a lot of dairies ... affect their sales."

Government overreach and distrust

Atarangi: "You know, how I see it... it probably sounds a bit silly, but I believe smoking is a human right. If that's what we want to do... that's what we want to spend our money on. That should be entirely up to us. I don't think it's fair for them to force us to quit." She added: "I just think they need to leave us alone. Honestly... I know they're trying to do things for the well-being of the people. ... They're literally stripping us of our human rights to spend our money where we want to, and yep tobacco, you know, there's a high chance of it killing you. But that should be up to us."

Dora: "Basically, they take away my fundamental right. It's my choice to smoke."

Health benefits for society and future generations

Maria: "Leaving my children's children, you know, smoke free.... yeah, it's good. ... They've tried with raising the cigarette prices... why not take this path and see where it goes? If you don't try something, then you're not going to find out in the long run, are you?"

Steve: "I think the benefit of... less people smoking... people will live longer, spending their money on better things, maybe pumping more money into the economy, their families, just kind of living life... being able to use that money on other things... Like, they'd be able to do more fulfilling things with this extra money that they're spending on tobacco."

Tatiana: "I think it's a positive thing if it's just to limit the access... You know, trying to curb it right now... you know, while you can. I mean [they] can't wait another five years, it's just gonna get worse."

Supplementary File 1: Eligibility Survey		
Start of Block: Default Question Block		
Reducing Tobacco Retail Outlets: Interviews *Eligibility Questionnaire*		
To check whether we're able to interview you, we'd like to ask you a few questions about yourself. Please remember that your responses will be kept confidential and you will not be personally identified in any research reports or publications.		
1. How old were you when you had your first puff on a cigarette?		
2. How old were you when you first started to smoke cigarettes at least once a week?		
3. For about how many years have you smoked at least one cigarette each day?		
4. On average, how many cigarettes do you smoke <u>each day</u> ?		

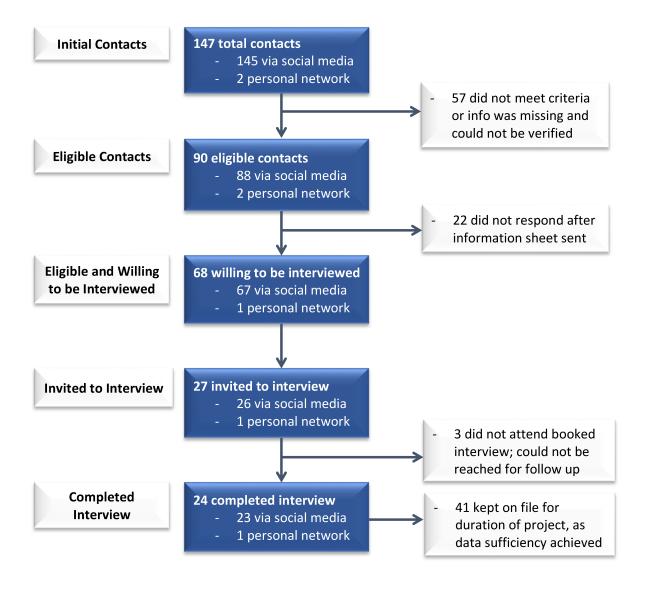
5. How soon after waking up do you have your first cigarette?		
O Within 5 minu	tes (1)	
O 6 - 30 minutes	(2)	
○ 31 -60 minute	s (3)	
After 60 minu	res (4)	
These are shops	shops where you currently purchase tobacco? where you would buy tobacco at least once a week. store names, streets, suburbs and city below	
Example store:	Four Square, Forbury Road, St Clair, Dunedin	
O Main store 1	4)	
O Main shop 2 (5)	
O Main shop 3 (6)	
O Main shop 4 (7)	
O Main shop 5(8)	
7. Have you ever deli smoke for at least 24	berately tried to quit smoking for at least 24 hours? (i.e., you <u>chose</u> to not hours)	
O Yes, within the	e last 6 months (1)	
O Yes, more than	n 6 months ago (2)	
O No, I have nev	er tried to quit smoking for more than 24 hours (3)	

8. I	f you wish to be interviewed and are eligible, how will you take part in this interview?
	O By phone - audio/voice only (1)
	O By phone- audio and video (2)
	Ousing a tablet (3)
	O Using a laptop or PC (4)
	Vhat is your date of birth? d/mm/yyyy
10.	Which of these do you <u>most</u> identify with?
	O Male (1)
	O Female (2)
	○ Gender diverse (3)

11.		Which ethnic group(s) do you identify with? Please tick all that apply		
		New Zealand European (1)		
		Māori (2)		
		Samoan (3)		
		Cook Island Māori (4)		
		Tongan (5)		
		Niuean (6)		
		Chinese (7)		
		Indian (8)		
		Other (such as Dutch, Japanese, Tokelauan) (9)		
So	So we can contact you, what is your phone number?			
wh	nat is your	email address?		

What is the best way to get in touch with you?	
C Email (4)	
O Phone (5)	
Thank you for your help with our research	
Please click on the arrow to record your answers	
End of Block: Default Question Block	

Supplementary File 2: Participant Flowchart



Supplementary File 3: Mapping Approach and Sample Maps

We used maps to provide participants with a visual representation of proposed retail reduction changes in their own city or town; the maps functioned as dynamic visual aids that facilitated discussion.

To construct maps, we first identified a central, well-known location about equi-distant from all major suburbs in each of the cities where the vast majority of our participants lived (i.e., Dunedin and Hamilton). Using CalcMaps, we drew a 10km radius around this central point, allowing us to effectively assign cut-off points for locations depicted within the maps.

We then used 'Google My Maps' (a service within Google Maps) to create baseline maps for both Dunedin and Hamilton. Using local online business directories, we added all known current tobacco retailers (within the aforementioned 10km radius) to each baseline map, grouping these together in a map 'layer' (essentially a list) labelled "Current Retailers- All City". We used bright red pins to depict each retailer in this list (84 in Dunedin and 130 in Hamilton). We then added a second layer within each map - "Retailers Post-Changes" – where we identified potential designated tobacco retailers following implementation of the retail reduction policy in each city (three supermarkets in Dunedin and six in Hamilton); we identified these outlets using green pins. Note: At the time the study took place, we discussed post-policy retailer locations with NZ Ministry of Health staff. However, the legislation now enacted had not yet been introduced, thus our maps represented a 'best guess' scenario. Since the Smokefree Environments and Regulated Products (Smoked Tobacco) Amendment Act was passed in late 2022, the government has released maps proposing how retail outlets might be distributed across NZ.[1] These maps (pages 4, 15), on which the Ministry of Health is now consulting, suggest the proposed number of retailers in Dunedin and Hamilton (where

the vast majority of our participants were located) accurately reflected the likely outlet locations.

For each new study participant recruited from Dunedin or Hamilton, we copied their baseline map (using a My Maps feature) and customised it further by adding a third layer within each map, labelled "Current Retailers- Interviewee". This layer contained each participants' current usual purchase locations (i.e., where they reported getting tobacco at least once a week), which we depicted using blue pins.

Google My Maps allowed us to show each map layer (or list) either separately or in combination with other layers by simply toggling these on and off. We could thus compare and contrast current and future retail landscapes more effectively than if we had used static map images. We purposefully applied bold, contrasting colours to our map pins (red, green and blue) as a visual aid to clarify the different outlet types. Where space allowed (i.e., in second and third map layers), we displayed name labels alongside each retailer to support recognition of usual outlets. In addition, we modified the overall look of our maps to enhance the visibility of location pins (this editable feature in My Maps allowed typical Google Map features to be muted or turned off altogether, thus simplifying viewing).

Most interviews were conducted online (via the Zoom e-conferencing platform), while some were conducted by phone. During online interviews, we showed participants their personalised map via the screensharing function within Zoom (for phone interviews, we emailed participants an advance digital copy of their map). Upon opening each participant's map, we first oriented them to what they were seeing (we began in each case by toggling OFF all three map layers, so that they saw with a simple baseline view of their city or town). We

familiarised them with the map by using our curser to point out key areas of the city (these areas had been agreed on in advance and did not change from participant to participant). We asked each person if they wanted us to point out any more key locations to help them get their bearings; we also offered each person more time to look at the map if they felt this would be useful. Participants quickly oriented themselves and none required further time to accustom themselves to the maps.

Once participants indicated that they were comfortable with the map, we used these to facilitate discussion about their own usual purchase locations (where they buy tobacco at least once weekly); their impressions of how the tobacco retail reduction policy would impact them, personally, and their impressions of how the policy would impact other people who smoke.

To explore their usual purchase locations, we toggled ON the map layer labelled "Current Retailers- Interviewee", to show each participant's current usual purchase locations (indicated with blue pins). See Figures S1 and S5 below. We hovered over each pin in turn, circling it with our curser and naming the retailer it represented. One by one, we asked participants about their reasons for purchasing from that specific location, using the map to facilitate discussion.

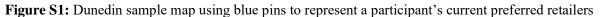
We probed participants' views on the impact fewer retailers would have on them personally by toggling OFF the map layer labelled "Current Retailers- Interviewee" and toggling ON the layer labelled "Current Retailers- All City". This latter map used red pins only to depict all known current tobacco retailers in a participant's city (mainly dairies, service stations, liquor stores and supermarkets; this map included retailers participants had identified as their usual

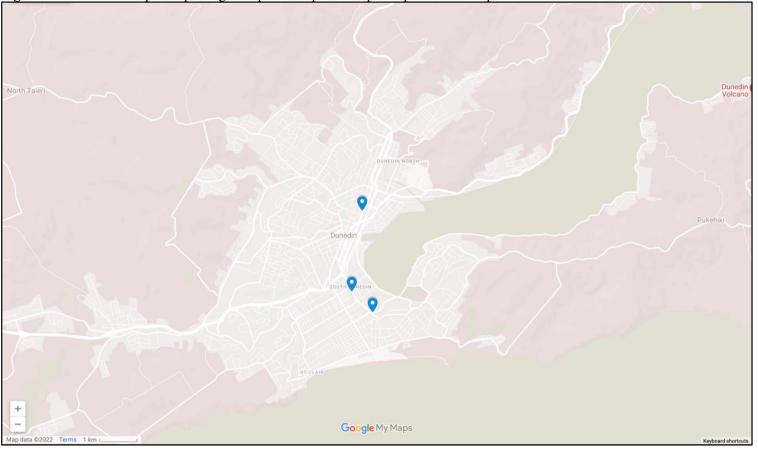
tobacco sources). See Figures S2 and S6 below. Once we had oriented participants to the status quo and checked they understood what they were seeing, we toggled OFF the map layer labelled "Current Retailers- All City", and toggled ON the layer labelled "Retailers Post-Changes", which used green pins only to depict potential designated tobacco retailers (supermarkets) following policy implementation. We had identified supermarkets as potential post-policy designated outlets following discussions with the Ministry of Health. See Figures S3 and S7 below. We outlined the proposed policy changes (to the extent possible at this time) and explained what the map showed. We checked if participants wanted to see a 'before and after' view again (i.e., current retailers vs proposed changes) or view both layers alongside each other (i.e., current retailers and proposed changes). See Figures S4 and S8 below. We then explored how they thought the policy changes would impact them personally.

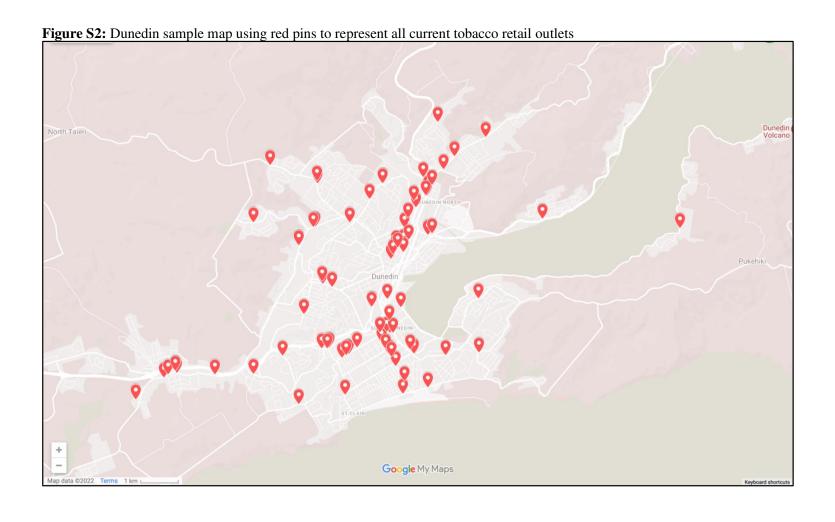
To probe the wider implications a retail reduction strategy would have, we again showed participants the status quo vs the proposed changes, as described above (i.e., toggling between "Current Retailers- All City" and "Retailers Post-Changes"). After checking participants understood the maps, we explored how they thought the policy changes would impact other people who smoke.

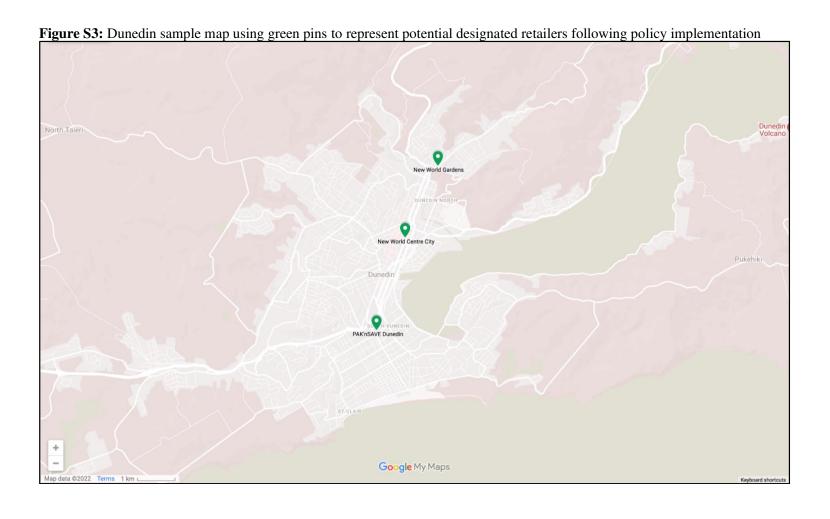
The maps were a very helpful tool to illustrate the extent of the proposed policy changes and facilitate discussions about the impact these would have. Many participants referred to their map during the interview to re-orient themselves and facilitate their thinking as they reflected on the questions we posed. For example, some asked us to zoom into specific areas of the city (e.g., their neighbourhood or another outlet from which they purchased tobacco) so that they could better visualise current retailer density in relation to the proposed changes.

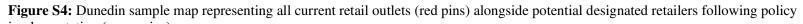
Dunedin Sample Maps

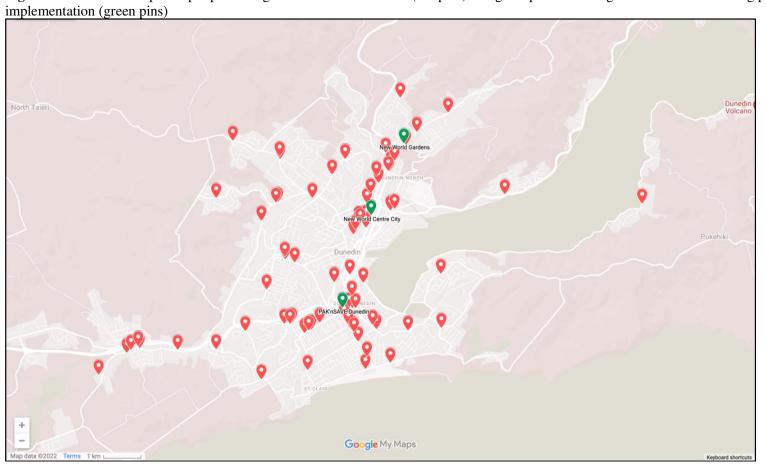




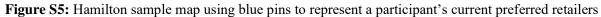


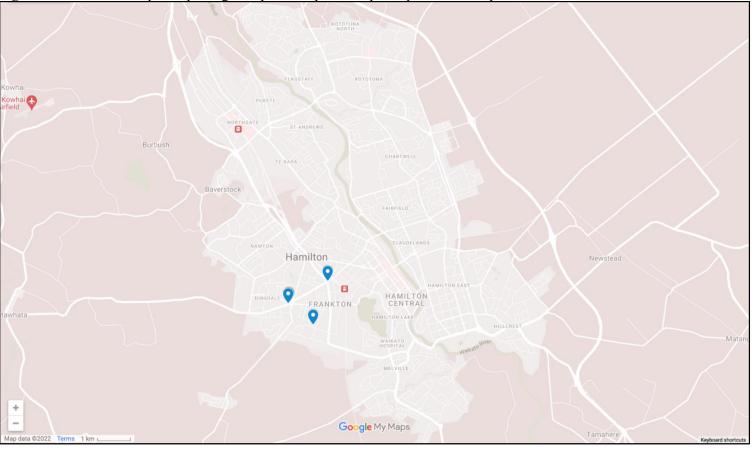


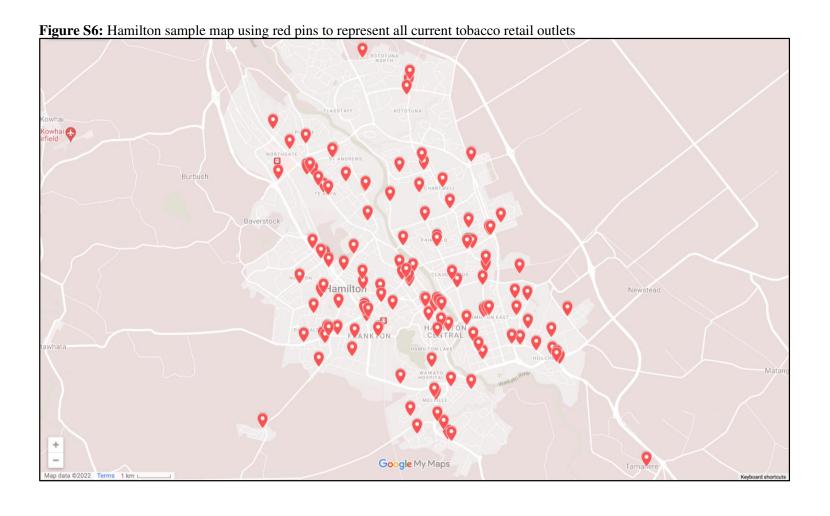


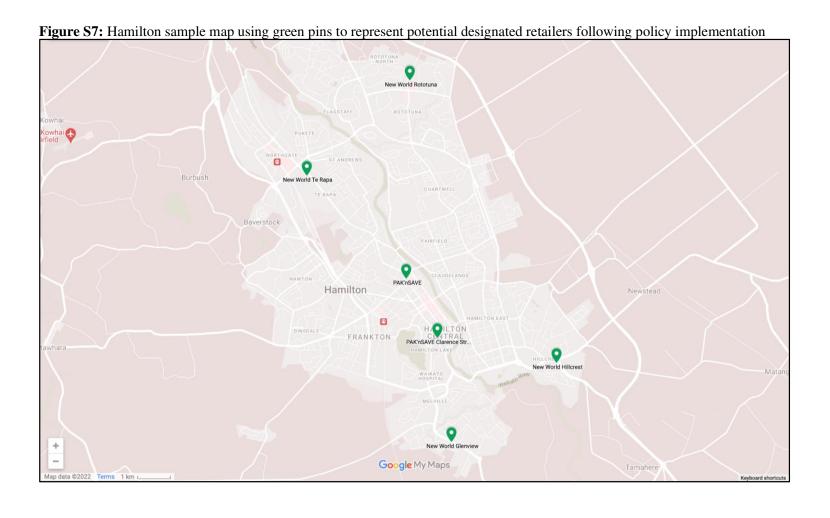


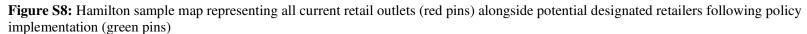
Hamilton Sample Maps

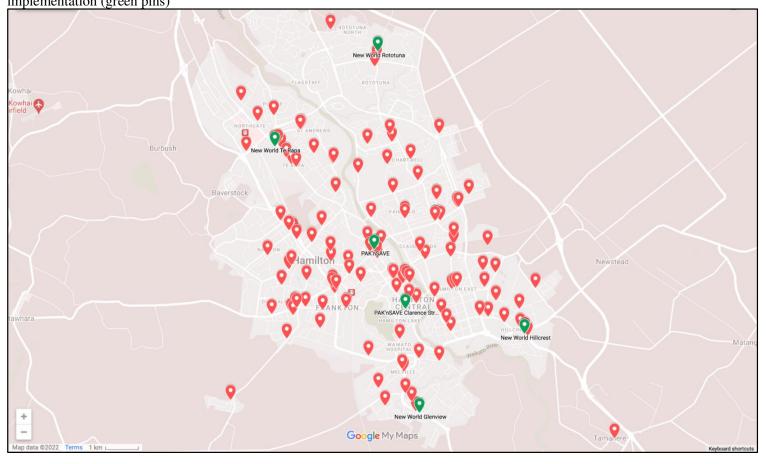












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1 Manatū Hauora Ministry of Health. Indicative Allocation of Stores Across New Zealand (Maps). New Zealand Government 2023. https://www.health.govt.nz/system/files/documents/publications/supplementary_maps_-_indicative_allocation_of_stores_across_new_zealand.pdf (accessed 5 Jan 2023).

Supplementary File 4: Interview Guide

Introduction

Hello I'm [interviewer name]; I arranged to meet with you to talk about how people who smoke might respond to a reduction in the number of tobacco retail outlets.

Interviewer personal introduction as appropriate for participant (may be modified depending on prior phone discussions).

Would you like me to open our meeting with a karakia? Proposed karakia to open discussion (if participant answered Yes):

Whakataka te hau ki te uru
Whakataka te hau ki te tonga
Kia mākinakina ki uta
Kia mātaratara ki tai
E hī ake ana te atakura
He tio, he huka, he hau hū
Tīhei mauri ora!

Before we start I'd like to remind you about your rights as a participant in the research project. We have gone through the information sheet with you when we phoned to see if you had any questions about the study. Are there any questions that you'd like us to answer now? Here is a copy of the consent form; please take a few moments to look through it. Before I go through the consent form, could I please turn on the audio recorder? I am using the record function on Zoom and an online transcribing package called Otter.ai.

Screen share consent form and outline key points with interviewee; ask if they have questions and address these.

While the recorder is running, I need to go through some key points with you:

- Your participation in the project is entirely voluntary and you can withdraw from the project at any time up to or during my interview. You have the right to ask questions at any time; if there is something that is not clear, please tell me and I will do my best to answer your questions.
- We will destroy personal identifying information including your contact details and the audio recordings will be destroyed at the conclusion of the project. We will keep the transcripts for at least five years.
- This project involves an open-questioning technique; that means we haven't determined all the questions ahead of time and some of these will depend on how our conversation develops. You always have the right to decide if you would prefer not to answer some questions, so if we come to a topic you don't feel comfortable discussing, please let me know and we will move on.

- You also have the right to stop the interview and withdraw from the study at any time up until the point the interview ends. If you decide to withdraw from the study, there is no penalty.
- We will offer you a \$40 gift voucher to recognise your time and assistance. The project is funded by the New Zealand Cancer Society and there will be no commercial use of the data obtained.
- We aim to publish the results of the project and present these at meetings; the University library will have a copy of any published work we prepare and we will send a copy of your interview transcript and interview summary. We will also send you a summary of the overall project findings. We will use our best efforts to keep your responses confidential to members of the research team named on this sheet.

Do you have any questions before we get started? Please remember that you can ask me questions at any time during the session.

Can you please confirm that you consent to take part in the interview? (ensure consent is recorded) if you are willing to participate, please say "I consent to take part in the interview".

We are offering everyone a \$40 gift voucher to thank them for contributing to our work. Could you please let me know if you would like a voucher from Farmer's or Bunnings?

Personal smoking

- 1. I'd like to start by asking about when you first started smoking. You indicated that you were ___ years old when you had your first cigarette? What was it like? Where did you get the cigarette from? Who were you with? Where were you?
- 2. You said you were ___ years old when you first started smoking at least weekly. When did you start smoking every day? What was it about smoking that led you to smoke more often? Do you smoke RYO (roll your own) or TM (tailor made)?
- 3. Thinking about your smoking now, you said you smoke around __ cigarettes each day. Does your smoking ever go up or down? When do you find it goes up? And down?
- 4. You said you had [insert details of quitting].
 - What prompted you to try and quit? How did you go about trying to quit? What sort of things do you think would make it easier for you to quit?
- 5. What do you hope will happen with your smoking in the next few years?

Sourcing tobacco – current situation

- 6. I'd now like to ask you some questions about where you get your tobacco from. About how often do you buy a pack/pouch?
- I'm going to share my screen with you so that I can show you a Google map of your town.
 [To start, all lists should be ticked OFF in the map legend. Only the base map should be visible]

Please look at this map on your screen. To begin, I'm just going to show you around for a moment, to help you get your bearings. Here we can see the peninsula; moving left we can see the harbour coming in towards South Dunedin and the downtown; this area here is South Dunedin; the downtown area is up here, including the Octagon right here; and North Dunedin is up in this area.

Now, I'm just going to make a slight adjustment to the map.

[Tick ON the list labelled 'Current Retailers-all City' in the map legend]]

You'll see now that we've used red pins to mark most of the retailers that currently sell tobacco in Dunedin. I'll give you a minute or so to take a look. If you have any questions about what you're seeing, please let me know.

[Pause, allowing participant to look. Probe further to help with orientation]

- To help you get your bearings, would you like me to point out any more key locations around the city as points of reference on the map?"
- Would you like more time to look at the map? [Pause to review map further, if requested]

Now, I'm going to highlight ONLY those places where you normally buy your cigarettes or tobacco. These are the stores you told us about in the survey you filled out for this study. [Tick OFF the list labelled 'Current Retailers-all City' in the map legend. Tick ON the list labelled 'Current retailers- interviewee']

Let's just go through these one by one. Looking at this store [name first store from on-boarding survey, hovering over it with curser and letting participant know that you are doing this]:

What are the main reasons you get your tobacco from this store? [If necessary, probe further re. how that particular outlet fits into their routine, and the time it takes to reach the outlet from wherever any reference point(s) might be that they've specifically mentioned]

What about ____? [repeat until all stores mentioned have been explored]

[STOP screen sharing with interviewee for the next two questions; map will be re-introduced in the following section]

- 8. Aside from buying from shops, are there any other places you get cigarettes from? Pause for participant to respond. Follow up by probing all options not mentioned.

 Have you ever bought tobacco online? Have you ever tried to grow your own tobacco? Have you ever bought tobacco from someone selling on the street or from a private home? What about from a market or other community venue?
- 9. What makes you go to those sources/places for tobacco? Do you buy the tobacco, or is it given to you? How easy is it to get tobacco from [relevant non-retail source]? How often do you go to xxx? What about xxx...?How much does it cost compared to buying from your regular shop(s)?
- 10. Do you know of any other ways of getting tobacco? Can you tell me about those? Have you ever used those sources? What made you try that source?

Sourcing tobacco – future policy situation

[Google map to be shown again via screensharing. Tick ON lists labelled 'Current Retailers-all city' and "Current retailers- interviewee"]

I'm now going to share my screen with you once again.

Here, you can see the same Google map of your town that we looked at before. We've used red pins to mark most of the retailers that currently sell tobacco in Dunedin. We've also used blue pins to highlight the places where you normally buy your cigarettes or tobacco, with store names written alongside them. I'll give you a moment to take a look. If you have any questions about what you're seeing, just let me know.

11. I'm now going to ask you what you think about a government policy that will greatly reduce the number of tobacco retail shops in your town and across the country. The details of this policy plan haven't yet been released, but the number of tobacco outlets throughout the country could drop from around 8000 to around 500. It's likely that very few dairies and petrol stations will still be able to sell tobacco.

So, at the moment you can buy tobacco from the stores you've indicated. Once the new policy is introduced, however, only a small number of stores will sell tobacco.

I'm now going to show you an example of what this policy change might look like in Dunedin.

[Tick OFF lists labelled "Current retailers- all city" and "Current Retailers- interviewee". Tick ON list labelled "Retailers post-changes"]

Now we've tried to show what the new policy might look like. This time we've used green pins to show the possible number of stores you'll be able to buy tobacco from in Dunedin after the policy comes into effect.

[CHECK: Does participant want to see before and after again? Would they like to see current retailers alongside the proposed changes? Do they have any further questions about what they are seeing?]

- 12. What do you think of this change in the number of shops selling tobacco? What do you think about the restricting the type of shops allowed to sell tobacco to just NN in your area? [personalise for each participant depending on location]
- 13. If tobacco is taken out of dairies and service stations, what sort of stores do you think should sell tobacco? What makes you think these would be suitable stores for selling tobacco?
- 14. If only a few stores sell tobacco in your town, how would you feel about that? How would you adjust to the changes? **Probe:** Change where you buy tobacco? Look for people selling tobacco on the street? Grow your own? What other things would you consider doing? How easy or difficult would it be to make those changes?
- 15. How do you think having fewer stores selling tobacco would affect the amount of tobacco you normally buy at a time? **Probe:** do you think you might purchase less, purchase more, plan/save for purchases, group buy, bulk buy? How would these changes affect your financial situation? How do you think you would handle that change?
- 16. Would having fewer stores selling tobacco affect how often you smoke? **Probe:** Would you smoke more, less, or about the same? **If change noted, ask:** how would that affect your daily smoking pattern? What effect would these changes have on your experience of smoking?
- 17. To what extent would having fewer places selling tobacco get you thinking about quitting? Or trying to switch to vaping?

Now, I'm going to ask you a series of questions that relate to <u>other</u> people's smoking behaviour. Please disregard the map for a few moments while I make a couple of changes.

[In the map legend, tick OFF the list labelled 'Retailers post-changes'. Tick ON list labelled 'Current Retailers-all City']

Please look at the map on your screen. Once again, you're looking at most of the retailers who currently sell tobacco in Dunedin. These are indicated with red pins.

[Tick OFF the list labelled 'Current Retailers-all City'. Tick ON the list labelled 'Retailers post-changes']

And once again, here is an example of where people could buy tobacco in Dunedin once the new policy comes into effect. Again, we've used green pins to show the possible number of stores selling tobacco after the policy is introduced. [CHECK: Does participant want to see before and after again? Would they like to see current retailers alongside the proposed changes? Do they have any further questions about what they are seeing?]

18. How do you think having fewer stores selling tobacco might affect other people who smoke? [purchase locations, purchase quantity and financial impact, amount smoked, quit attempts...]

- 19. How do you think the changes might affect people who are thinking about quitting? What about people who have recently stopped smoking within the last few weeks or months? Or people who stopped smoking a year or more ago? How do you think these changes might affect people's willingness to try vaping instead of smoking?
- 20. How do you think having fewer stores selling tobacco might affect young people who want to try smoking? What about young people who have already started smoking? How do you think these changes might affect young people and their willingness to vape [check for impact on never smokers and current smokers]?
- 21. How do you think having fewer stores selling tobacco might affect the way other people think about people who smoke? Probes: How do you feel about that? What effect would having fewer stores selling tobacco your perceptions of smoking? Are there any other ways you think you might be affected?
- 22. Do you think having fewer stores selling tobacco could lead to any unintended outcomes? What do you think these would be? How would these affect you? What would you do to respond? What do you think other people who smoke would do?
- 23. Some groups have commented on these changes. A group representing some dairy owners has said that tobacco sales are essential to their businesses and that if they couldn't sell tobacco, they would go out of business. What do you think of this argument? What do you think could be done to help dairies and small businesses transition away from selling tobacco?
- 24. Some research from Aotearoa New Zealand has found that tobacco and cigarettes make up only a small percentage of the purchases people make at dairies and the researchers have questioned dairy owners' concerns. Does this research affect how you see dairy owners' arguments? In what way?
- 25. The dairy owners' group also claim that restricting the sale of tobacco will lead to a bigger black market controlled by gangs. What do you think of this argument? How big a problem do you think black market tobacco will be? How could black market tobacco be better controlled?
- 26. Some people think it's important that the Government introduce policies to improve people's health but other people think the Government should stay out of people's lives and some people don't really care. What are your thoughts?
- 27. Are there any benefits to these changes that we haven't talked about yet? Can you tell me about these?
- 28. Are there any negatives we haven't talked about yet? Can you tell me about these?

Summary

29. These are all the questions I wanted to ask you. Do you have any other comments you'd like to make? Is there anything we haven't discussed that you'd like to comment on?

If meeting began with karakia please note:

Thank you again for making time to share your ideas with us. I'd like to close our meeting with a karakia:

Unuhia, unuhia Unuhia ki te uru tapu nui Kia wātea, kia māmā, te ngākau, te tinana, te wairua i te ara takatā Koia rā e Rongo, whakairia ake ki runga Kia tina! TINA! Hui e! TĀIKI E!

Supplementary File 5: Codebook

Convenience and cost as twin	imperatives
Current preferred retailer determined by convenience	Atarangi: "The dairy is sort of where I go get my bread and my milk and stuff, if I need cigarettes, often I'll pick them up at the same time. Yeah, it's close, I'm literally around the corner from it."
	Elsie: "It's the first shop I come to it's just a couple of minutes down the road."
	Leanne: "It's actually one block from me. So I can walk there and sometimes I pick up my tobacco on Monday when I'm passing with the dog. I can pop in and collect when I'm filling up with petrol."
Current preferred retailer	Jake: "Compared to everywhere else that you can buy tobacco from they're two of the cheapest places."
determined by cost-savings	Rita: "I can buy my smokes, papers and filters for \$65 there. Yeah if you go to BP or to Z, it's probably \$70-ish."
	Sofia: "So, if I'm running a bit likeon a budget because they have, they sell cheap cigarettes down there. So, if I'm running a bit low on cash I'll go [there]."
Expectation of no (or minor) personal inconvenience in response to policy change	Nicolas: "I don't think I'd have to make many changes. I probably would make a specific time to go to the supermarket, you know I'd go when it's least busy, just so I could get in and get out. You know, because I'm gonna have to line up behind people But yeah, I feel like I'd have to change, like, little aspects. Little things."
	Pablo: "Yeah, well it doesn't matter for me, I can just walk down there and get some."
	Rita: "I mean, I shop at New World and PAK'nSAVE, so it's not going to really affect me because I'll just have to make sure that I get [tobacco] in my shopping."

Sofia: "My perspective, I don't mind New World is just not far from me, about a five minute drive	
But the thing with these places is that their tobacco and stuff is probably gonna be more expensive than	
the other shops around, the dairies especially."	

Expectation of considerable personal inconvenience in response to policy change

Amelia: "Yeah, it [would] be very, very challenging, I think. PAK'n'SAVE is quite a busy place in general anyway. I try to avoid it as much as possible. It's not very often I go [there]."

Olivia: "I'd have to drive a long way. Like [now] I just nip up there... you know, supermarket parking is a nightmare anyway... I'm not going to drag my kids halfway across the city, over to a busy carpark, line up, just for a pack of cigarettes. Like, it's just annoying."

Uri: "Either I'll have to walk... further, or start using a bus, or stuff like that... Like, to me, it's just a nuisance, because I don't have a car or any mode of transportation."

Vera: "Well it'll be the whole travelling, and the distance of travel. And the price of gas these days has been so hectic. Who wants to be, like, constantly travelling back, just to buy one packet or something?"

Responding to disruption in the retail landscape

Bulk-buying anticipated in response to policy change

Amelia: "I'll have to potentially... buy in bulk, so I don't need to go every couple of days to PAKn'SAVE... I guess I'd have to do it fortnightly because I get paid fortnightly."

Sofia: "I think these changes will impact the more... lower income people, beneficiaries... I think I can probably see that they would... be doubling up on cigarettes each time they go. [Instead of] getting one packet, they're probably getting two or three, you know, to last them till their next payday."

Olivia: "I'd just, you know, maybe put out X amount each day. Because you don't think so much now... if you run out, you just go get more. Because it's easy, it's right there. So I guess maybe if I had to go all the way down there and line up [to purchase tobacco], I'd probably buy X amount for the week."

Uri: "Some people... may feel more inclined to buy cheaper. Instead of buying... like, more expensive brands, [they'd] start buying, you know, multiple of the cheaper ones."

No anticipated change in tobacco purchase quantity	Leanne: "I'm an addict. I've needed a packet of tobacco ever since I shifted to that. I'd smoke 20 cigarettes a day and I get you know, that number out of a packet per week."
	Tatiana: "It's not gonna phase me or change any of my habits because I go there twice a week anyway. And I told you I buy a packet in the beginning of the week [and] at the end of the week."
Budgeting to maintain tobacco supply in response to policy change	Sofia: "It probably would put a strain on my budget. I would have to you know, think about my budget when paying for cigarettes from those places."
Cut-back or quit attempts likely to be facilitated by policy change (and reference to	Bryan: "I thought that if they reduce it down to that amount [of shops] it's gonna make a lot of people think twice about it I want to be healthy myself. And I know that smoking is dragging me down."
anticipated health benefits as a result)	Elsie: "Well, it's probably a good thing for people that are thinking about quitting. It's another reason to not do it, isn't it, if you have to go further away to get it?"
	Fabien: "I think should help a lot of people to quit, yeah, because people might not be able to get into town and stuff like that to go buy smokes."
	Greta: "If they were already considering it, I think, you know, that may well be the factor in terms of actually quitting." She added: "You might not be able to change the people 50 plus, but there's plenty of room for change for younger folk coming through. For [whom], you know, it should be totally unacceptable."
	Harriet: "People who have disabilities or low immune systemsyou don't know who you're smoking around you don't know, like, who you're breathing that onto."
	Nicolas: "It might be that nudge they need. You know, [it] might be the final decider that they're going to quit."
	Sofia: "I feel probably it'd be a good impact because you can't just say 'Oh, there's a shop down the road, I'll just go and get me some smokes'. You know, you've got to travel that distance and they're

	probably thinking, 'Well, no, I'll give it a trial, see how I go for another two hours.' And then that day will pass and [they'll] go 'Oh, well, I'll try for a whole day'. It'll encourage them to, ah, quit smoking."
Relapse risk likely to be reduced by policy changes	Fabien: "It would stop them from being tempted to go back to smoking."
	Steve: "I definitely think that will help because now that temptation isn't there. Like if they could just pick it up around the corner, and now they can't, maybe they'll be like, 'Oh, yeah, this is a sign. I do need to give up.' I think it's mostly gonna be a kind of internal reflection when these policies come through. It's really going to make people re-evaluate do I really need this to survive?"
Increased use of other nicotine sources in response to policy	Pablo: "Heaps of people smoke vapes Yeah, I think it will it'll explode."
change	Rita: "I think more people will vape. Everyone that I know wants a vape, or is looking at getting a vape."
	Sofia: "For the next generation I reckon it's gonna be all about vaping. There'll be less cigarettes, and it'll be harder for them to buy."
	Uri: "You can still buy vapes at every single convenience store around. And [they're] cheaper as well."
Increased risk of judgement and stigma in response to policy change	Bryan: "It will probably make me more likely to give up because I don't want to be perceived as being the outsider or, you know, separate from a social situation."
· · · · · · · · · · · · · · · · · · ·	Olivia: "I guess it's a little bit of embarrassment because there's so much more emphasis on how bad smoking is I feel a little bit, like, predisposed to their judgment. It could just be my anxiety but I don't want people to think that about me."

Expectation of no (or minor) effect on personal experience as a person who smokes	Nicolas: "I've never really gone and thought about what other people think of the fact I smoke. You know, obviously I carry a pack of mints with me but I don't feel dirty because I do it."
a person mie smenes	Rita: "Doesn't really affect me I suppose. I've spent so much [time] over my last six months working on me, and stopping worrying about what other people think, that I can't worry about them."
	Steve: "Oh honestly, I don't really care. I always get judgment and that for being a smoker but it's, you know, nothing off my back. I don't mind."
Policy change will place disproportionate cost burden on people who are less well-off financially	Elsie: "Yeah, I think it will impact poor people more than it will impact well-to-do people. It won't make any difference to them When you get paid your benefit, what's the first thing you're going to go and do?So, some of those people that live further away from supermarkets [will] probably spend less money on things so that they can get cigarettes."
	Sofia: "Thinking about the lower income people who would find it very hard to, maybe, afford these cigarettes because yeah, you wouldn't be getting discounts and stuff like the cheap cigarettes. Whereas [if] they went to the dairies, they would be able to afford it. You know, they'd have that budget to buy cigarettes."
Policy change will place disproportionate burden on people with limited access to	Greta: "I think it will have a big impact on the lower socio-economic group because they're not going to have the same ability to, you know, drive or whatever to get to a supermarket to buy their cigarettes."
transport	Sofia: "And it'll be just harder for them to get to these places, as some of them might not have transport to get to these main shops. It'll be a lot harder for them, because you know, some of them, may not have bus fare or, you know, they may need to walk to these places and the distances."
Policy change will place disproportionate psychological burden on those unable to give up (i.e., increase stress)	Atarangi: "It will stress me out. (laughs) It would absolutely terrify me and when I get into those sorts of states, I will sit here and I'll just smoke and smoke and dwell and think about things The thought of giving up, like oh my gosh It's definitely the whole mental side of things as well. Knowing that I'm not going to have something like this for myself. Smoking's just for me I'm having a rough day and I'm on the verge of tears with my kids, I come outside because they know when mums outside, I'm having a break. And the whole mental aspect is I'm terrified trying to take that away is quite scary for me."

Maria: "I think, you know, people like that with mental [health issues] ...they'll be needing that extra support, people that are easily stressed and whatnot."

Social gains and losses

Reduced smoking among youth

Bryan: "People not having to worry about having their kids being able to readily obtain tobacco will be a good thing." He added: "If they're only selling from designated supermarkets, you're probably going to have a lot more stringent ID-ing or like security measures in place as opposed to the local corner dairy."

Elsie: "I think if they just make it supermarkets, they'll probably introduce even firmer rules around the sale of them. ...I think it will make it harder for people to buy them." She added: "Some of these dairy owners would rather make the sale than ask about the age restriction."

Greta: "I think sometimes it's easy for dairies to sell to younger folk."

Rita: "It's pretty hard to get stuff in the supermarket without ID... they're really strict."

Vera: "I just think it will just [give youth] more of a chance ...to make up their own minds. It'll be like freedom of choice that way."

Increased crime targeting designated retail outlets

Ivan: "Robberies or stuff like that... you know, it's all going to be targeted on a centralised location."

Nicolas: "You know... people already can't afford cigarettes. That's why there's a decent amount of crime with, you know, ram raids... holding up gas stations and stuff. I would look at the risk of... there's at least 50 to 70 people in a supermarket at all times, right? And you have a couple of people come in at any given time of day, holding up the place to get cigarettes. You're gonna have a lot more people in danger. You know, it's going to be... not an easier target, but a bit more worrying."

Pablo: "The shop owners, they all get smash and grabs... They get robbed all the time, the shops up here, for cigarettes. [It would be] better for the shop owners."

Reduced viability of dairies and other small retailers

Greta: "They're gonna lose sales of other products." She added: "I think that's quite sad because... little family businesses are going to collapse."

Olivia: "Well, I think it's sad for small businesses, because... there's a small profit margin in tobacco. But... you'll buy a drink or a candy bar or a pie... and I think that's where they benefit from being able to sell those products, by the extra purchases. As little add-ons, you know, the little counter grabs that they set up to lure you in... things like that. So, I think if people aren't there to buy the tobacco, they'll lose sales on other products." She added: I don't think that it will impact them into liquidation or anything crazy, but I do think it will affect their sales quite a lot."

Rita: "If I didn't go to the dairy to get my smokes, then I'm not going to buy my milk from the dairy. I'm not going to buy my bread, and all my lollies or, you know, if I want a treat, or ice cream, I'm gonna get it from the supermarket. If other people are like that, it's going to put these small businesses out of business, and that's really sad." She added: "But yeah, I'm not gonna go into a dairy for those sort of things if I'm not going in to get smokes, because you do pay a little bit extra when you go to the dairy. But it's a convenience thing, you know."

Sofia: "It's the cigarettes that draw a lot of people to these ... dairies. You know, they're probably thinking, 'Oh well, if I'm gonna get some smokes, I might as well grab a bread ... a milk, and maybe some lollies for the kids.' But if they have to travel to the supermarket ... it's cheaper there ... you know, you can get a few more items from the bigger stores while you're there. So, probably, it will cut a lot of dairies ... affect their sales."

Government overreach and distrust

Atarangi: "You know, how I see it... it probably sounds a bit silly, but I believe smoking is a human right. If that's what we want to do... that's what we want to spend our money on. That should be entirely up to us. I don't think it's fair for them to force us to quit." She added: "I just think they need to leave us alone. Honestly... I know they're trying to do things for the well-being of the people. ... They're literally stripping us of our human rights to spend our money where we want to, and yep tobacco, you know, there's a high chance of it killing you. But that should be up to us."

Dora: "Basically, they take away my fundamental right. It's my choice to smoke."

Health benefits for society and future generations

Maria: "Leaving my children's children, you know, smoke free.... yeah, it's good. ... They've tried with raising the cigarette prices... why not take this path and see where it goes? If you don't try something, then you're not going to find out in the long run, are you?"

Steve: "I think the benefit of... less people smoking... people will live longer, spending their money on better things, maybe pumping more money into the economy, their families, just kind of living life... being able to use that money on other things... Like, they'd be able to do more fulfilling things with this extra money that they're spending on tobacco."

Tatiana: "I think it's a positive thing if it's just to limit the access... You know, trying to curb it right now... you know, while you can. I mean [they] can't wait another five years, it's just gonna get worse."