Hanmer Springs Smokefree and Vapefree Zone

Evaluation report



An evaluation prepared for the Cancer Society by the Information Team, Community & Public Health, Canterbury DHB



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Executive summary

Background

In New Zealand, tobacco smoking continues to be an important public health issue and a leading cause of preventable death and disease (Ministry of Health, 2018a). Smoking disproportionately affects certain groups within the population, particularly Māori and Pacific people and those living in the most socioeconomically deprived areas (Ministry of Health, 2017). Furthermore, exposure to second-hand smoke has also been demonstrated to lead to premature death and adverse health conditions in adults (for example, stroke and ischaemic health disease) and children (Mason, 2016).

New Zealand's goal is to be smokefree by 2025. Increasingly, local government authorities are considering whether public spaces adjacent to retail and other business premises (i.e., entire Central Business Districts or CBD zones) can and should be smokefree. In addition, it is being considered whether current and future outdoor smokefree spaces should also be designated vapefree, since the growing use of vaping and e-cigarette devices (both nicotine-containing and non-nicotine containing) is an emerging public health issue.

Tourism is important for New Zealand and little work has been done to investigate how acceptable smokefree and vapefree outdoor spaces are to our domestic and international visitors. Hanmer Springs, an alpine tourist centre in the South Island, recently implemented a voluntary Smokefree and Vapefree Zone across the town's entire retail/business district (a six-month trial). The Smokefree and Vapefree Zone was the result of a collaborative partnership with the local public health unit (Community and Public Health, a division of the Canterbury DHB), the Cancer Society, local council, businesses, and the community.

Methods

The overall aim of the evaluation was to assess and report the way in which the Smokefree and Vapefree Zone trial was implemented. This included assessing the general level of awareness of the zone, the attitudes of stakeholders, any changes in the prevalence of outdoor smoking and vaping, any unintended consequences, and the overall level of support for the continuation of the zone. The evaluation used a mixed-methods design. This methodology involved the collection, analysis, and integration of observational data, quantitative data, and qualitative data during a phased study period of six months (a before-and-during evaluation design based on convenience sampling within the geographic community)¹. Observations of smoking and vaping prevalence were assessed via observational scans conducted before implementation and relatively soon after implementation. Then, key stakeholder groups (residents, business owners, and visitors) were invited to participate in face-to-face interviews, and to complete feedback cards (visitors) and online surveys over the course of the trial and evaluation period. Overall, this evaluation collected data via four different surveys.²

¹ The sample included residents, non-resident property owners, and visitors.

² Four surveys forming six data streams (surveys 3 and 4 each used two survey data collection methods, 3a/3b and 4a/4b respectively).

Findings

Overall, there was strong support for the Smokefree and Vapefree Zone. Although there were differences in the level of support across the different stakeholder groups, a large majority of the nearly 1,000 total respondents (across the various feedback mechanisms) indicated support for the zone. Moreover, a substantial proportion of the visitors surveyed also indicated that they found smokefree zones in New Zealand to be generally attractive, indicating that they would be either more likely or no more or less likely (i.e., neutral) to visit other tourist destinations that have smokefree zones.

Both direct observation and self-report data collected for this evaluation suggested that the smoking and vaping prevalence³ in Hanmer Springs is less than 5% (≈4.8% for smoking and <2% for vaping, across the resident and visitor population). Further, the observational data indicate that the zone trial was associated with a reduction in the proportion of adults visibly smoking or vaping within the zone. Respondents did not differentiate between smoking and vaping with respect to the restrictions that might or should be applied. In other words, respondents largely indicated that smoking and vaping should be treated the same (i.e., both regulated or both unregulated). Some respondents, while acknowledging that vaping probably does not present significant health risk to others, commented that both smoking and vaping caused 'offence'. Approximately 10% of respondents indicated that vaping should be unrestricted in the zone.

Conclusion/Discussion

Overall, a clear majority of 1,000 total respondents to the feedback mechanisms employed for the purpose of this evaluation of the Hanmer Springs Smokefree and Vapefree Zone (including surveys of residents, non-resident property owners, business owners/managers, and domestic and international visitors) supported the zone. The trial and evaluation provide an evidence-based rationale for smokefree *and* vapefree CBD zones, as well as guidance on policy development and implementation. One novel contribution of the trial/evaluation is a comparative analysis of stakeholders' attitudes to the inclusion of vapefree alongside smokefree, within designated zones. The evaluation findings from this regional township provide valuable insights for other jurisdictions considering implementing smokefree and vapefree zones. Moreover, the findings support wider national advocacy initiatives, as New Zealand strives to create a smokefree future.

³ The proportion of respondents who reported that they are regular smokers or vapers, not the proportion of adults observed smoking and vaping within the trial zone.

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Hanmer Springs Smokefree and Vapefree zone trial

Background

In New Zealand, tobacco smoking continues to be an important public health issue and a leading cause of preventable death and disease (Ministry of Health, 2013). It disproportionately affects certain groups within the population, particularly Māori and Pacific people and those living in the most socioeconomically deprived areas (Ministry of Health, 2017). Furthermore, exposure to second-hand smoke has also been demonstrated to lead to premature death and/or increased risk of disease in adults (for example, stroke and ischaemic health disease) and children (Mason, 2016).

An emerging public health issue is the growing use of vaping and e-cigarette devices⁴ (both nicotinecontaining and non-nicotine containing), as the sale of vaping and heated tobacco products in New Zealand became legal in 2018, under the Smokefree Environments Act 1990 (Ministry of Health, 2018b). While vaping products may be useful for smoking cessation and have been accepted as being less harmful than tobacco cigarettes, it is still unclear what the health risks of vaping are for users and bystanders (Hess, 2016; World Health Organization, 2016). Additionally, the growing use of vaping products may lead to re-normalising smoking and risk the uptake of vaping by nonsmoking youth, which may be a precursor to smoking (World Health Organization, 2016). Due to the continually evolving and inconclusive evidence on vaping and e-cigarette devices, the World Health Organization has advocated for vaping products to be prohibited in indoor spaces or in areas where smoking is not permitted (World Health Organization, 2016).

Smokefree legislation and policy has been shown to reduce smoking behaviours, second-hand smoke exposure, and adverse health outcomes (Hoffman & Tan, 2015). Smokefree environments help reduce the visibility of smoking, which leads to fewer young people starting smoking and more smokers making quit attempts as well as supporting those who have already quit to remain smokefree (Hoffman & Tan, 2015). Most existing policies are voluntary, self-regulatory policies rather than legislative in style, because coercive measures with rigid enforcement have been shown to undermine cooperation and community trust (Levy, 2007). Voluntary policies are designed to encourage a change in social norms regarding the acceptability of smoking. Throughout New Zealand there have been a range of smokefree outdoor policies implemented.⁵ Some smokefree environments are more common in New Zealand than others, such as green spaces, council events, council building entrances and exits, and social housing. In contrast, fewer councils have adopted smokefree policies in environments such as outdoor dining, beaches, civic spaces and streets.

Smokefree outdoor dining has been implemented through bylaws, leases and voluntary policies. For example, Rotorua Lakes Council adopted a non-regulatory policy in early 2018, making all paved eating areas, Eat Streat (an inner city hospitality area with extensive outdoor seating), and markets

⁴ A vape or electronic cigarette is an electrical hand-held device that heats liquid to produce vapour that the user inhales or vapes (Ministry of Health, 2016; Public Health Association Australia, 2018). The components of the liquid vary widely. Currently, most contain propylene glycol and flavouring agents. Some, but not all, liquids contain nicotine (Ministry of Health, 2016).

⁵ https://www.smokefree.org.nz/smokefree-resources/maps-of-nz-councils-smokefree-outdoor-policies-and-spaces

held in the inner city smokefree and vapefree (Rotorua Lake Council, 2016). Alternatively, Palmerston North City Council changed bylaws, requiring all premises with outdoor eating and drinking areas on footpaths and other council land to display Smokefree signs and not provide ashtrays (Gendall, 2007). In other areas, for example Invercargill and Whanganui, local councils have designated some streets and town centres as smokefree and vapefree areas. These all operate under a non-regulatory policy and rely on the support of the public, local businesses, and organisations to encourage a smokefree and vapefree area (Hutt City Council, 2018; Invercargill City Council, 2017; Whanganui District Council, 2017).

In Canterbury, Community and Public Health and the Cancer Society Canterbury – West Coast Division have worked in partnership over several years on smokefree outdoor area policy with local councils. Some of the work has involved the Fresh Air project, which supports hospitality venues to introduce and implement smokefree outdoor dining areas. Key features of this partnership included strong organisational commitment, clear purpose, trust, and a complementary mix of skills and knowledge.

History/context

In 2012, the Hurunui District Council adopted a Smokefree Outdoors Strategy that made all high profile parks and all playgrounds smokefree. In 2016, this was revised to cover all parks, playgrounds and reserves, cemeteries, entrances and exits of all council-owned buildings, indoor areas of council rental properties, all events run by the Council and an endorsement of the Smokefree Aotearoa 2025 goal (Hurunui District Council, 2012, 2016). Additionally, many businesses in Hanmer Springs had already opted to operate a fully smokefree premise, including hospitality venues, accommodation providers, and some family activities.

Two surveys have previously been undertaken to gauge business support for further smokefree outdoor spaces in the Hanmer Springs village. In 2017, the Cancer Society and Community and Public Health, undertook a survey with 44 tourism-related businesses. One of the findings was that a majority supported the introduction of a voluntary smokefree street zone (88% in favour). This survey was followed by another survey conducted by the Cancer Society in 2018, which echoed the previous survey results. The survey sought the view of 106 business premises in Hanmer Springs and found a majority supported the introduction of a smokefree street (63% in favour, 13% undecided, 24% opposed) (Cancer Society, 2018). The results were reported back to the Hurunui District Council, Hanmer Springs Community Board and other community boards and organisations (such as Hanmer Springs Business Association, Hurunui Tourism Board, Enterprise North Canterbury, and Hanmer Springs Medical Centre).

In June 2018, the Hanmer Springs Community Board endorsed the establishment of a six-month trial and evaluation of a Smokefree and Vapefree Zone in the main retail/business area and surrounds. In November 2018, the Hurunui District Council also endorsed the trial. The main point of difference for the Hanmer Springs trial was that (1) the zone was defined and promoted as being explicitly both smokefree and vapefree, (2) the zone trial effectively covered the entire CBD/urban space (albeit a small overall area, given the small size of the Hanmer Springs village), and (3) Hanmer Springs is significantly defined by its status as a tourist town and the trial/evaluation sought to include international visitors' knowledge, opinions and expectations about the Smokefree and Vapefree

Zone in Hanmer Springs; a focused enquiry that had not previously been undertaken in Hanmer Springs.

Programme aim

The overall aim of the Hanmer Springs Smokefree and Vapefree Zone was to create a healthy, clean environment where the residents of Hanmer Springs and visitors can enjoy the village without exposure to addictive smoking behaviours. The findings of this trial will be used to provide information that can help refine the programme, and also inform other councils/groups that are considering implementing a smokefree and vapefree outdoor area.

Programme objectives

The programme of work included the practical implementation of the zone as well as the embedded evaluation and engagement work (therefore, some of the objectives relate to implementation and others to community engagement/evaluation processes).

The main objectives of the Hanmer Springs Smokefree and Vapefree Zone trial were to:

- develop a range of communication tools including signage, promotion and marketing to increase public and visitor awareness of the Smokefree and Vapefree Zone in Hanmer Springs⁶
- continue to engage with hospitality venues and give them the option to join The Fresh Air Project⁷
- ensure the public were made aware of cessation support services available to them
- explore business community, tourist and the local community views, expectations and experiences of the introduction and implementation of the Smokefree and Vapefree Zone
- determine if there was any measurable impact on tourism and/or business
- reduce exposure to second-hand smoke and vape vapour and smoking/vaping behaviours
- contribute to the ongoing discussions with local authorities on the merits of smokefree outdoor areas, and
- contribute to the Smokefree Aotearoa 2025 goal.

Key stakeholders

Key stakeholders involved in the smokefree and vapefree Hanmer Springs trial include:

- Cancer Society Canterbury–West Coast Division main funder and resourcing of the trial
- Hanmer Springs Community Board member of steering group
- Community and Public Health (CPH), Canterbury DHB evaluation, and member of steering group
- Hurunui District Council (HDC) member of steering group
- Hanmer Springs Thermal Pools member of steering group
- Hanmer Springs Medical Centre member of steering group
- Hurunui Tourism Board member of steering group
- Local Hanmer Springs community, and
- Other City/District Councils in New Zealand.

⁶ Note that the programme of work did not include a Hurunui District Council-led public consultation process. Community engagement (rather than consultations) was carried out to some extent by the Cancer Society over several iterations of community surveying on smokefree spaces, over the period 2012–2018.

⁷ www.FreshAirproject.org.nz

EVALUATION

Evaluation aim

The overall aim of this evaluation was to assess and report: the extent to which the Smokefree and Vapefree Zone was being implemented; the levels of awareness, attitudes and any unintended consequences; the extent to which the intervention was achieving a smokefree and vapefree environment; and the level of support for continuation of the Smokefree and Vapefree Zone in Hanmer Springs.

Evaluation objectives

The key evaluation objectives (including key data collection methods) were to:

- 1. assess how visible and clear the smokefree and vapefree signage was within the zone
- 2. determine whether the zone signs were understood, i.e., did visitors to Hanmer Springs understand what the Smokefree and Vapefree Zone was and what it meant/awareness?
- 3. assess public support for the Smokefree and Vapefree Zone (for example, from Hanmer Springs residents and visitors) including differentiating between smokefree and vapefree
- 4. assess resident support for the Smokefree and Vapefree Zone
- 5. assess visitor support for the Smokefree and Vapefree Zone
- 6. explore business owner/manager support and perceptions of the impact of the zone on the business, and views about continuing the Smokefree and Vapefree Zone, and
- 7. measure and report the (change in) observed smoking and vaping prevalence in the Smokefree and Vapefree Zone before and during the trial.

Ethical considerations

This evaluation was reviewed against the Health and Disability Ethics Committee (HDEC) flow-chart⁸ and it was determined that the criteria for Health and Disability Ethics Committee review were not met. The study is also considered low-risk, as the survey was confidential and those invited could decline to participate (in part or in full). Further, the evaluation did not involve human participants recruited in their capacity as:

- o consumers of health or disability support services, or
- o relatives or caregivers of such consumers, or
- volunteers in clinical trials, or
- o human tissue, or
- o health information.

Privacy, confidentiality, and burdens minimised

Privacy and confidentiality were managed in the evaluation by ensuring any survey data that could identify respondents (e.g., name, business name, and business address) was not reported. All quotes used in the evaluation report were checked and edited if necessary to remove any identifying information (individual or business). Respondents' contact details were only stored temporarily if respondents requested a copy of the final report and evaluation findings (and will not be used for

⁸ https://ethics.health.govt.nz/hdec-review-and-approvals/find-out-if-your-study-requires-hdec-review

any future purpose). Participants were not interviewed more intensively than necessary and only information directly relevant to the evaluation was collected.

Equity

In New Zealand, at the time of the 2013 census, there were significantly higher proportions of regular smokers in the Māori and Pacific ethnic groups, compared to European (30.9% and 21.6% vs 13.7%, respectively). This was also true in the Hurunui District (28.8% and 20% vs 14.2%, respectively, although noting the relatively small absolute numbers of Māori and Pacific people in the Hurunui District) (Statistics New Zealand, 2013). Furthermore, smoking prevalence is higher among adults living in neighbourhoods with higher deprivation scores in New Zealand (Atkinson, 2014). While this smokefree and vapefree outdoor policy (and this evaluation) does not directly address these disparities, it aims to reduce smoking behaviours, second-hand smoke exposure, and adverse health outcomes for the whole community.

Data collection and analysis

Introduction

This evaluation of the Hanmer Springs Smokefree and Vapefree Zone used a mixed-methods design (Hanson, Creswell, Clark, Petska, & Creswell, 2005) which involved the collection, analysis, and integration of quantitative data (both observational and self-reported) and qualitative data during a phased study over six months (a 'before-and-during' design). This design differs from a before-and-after design in that some data collection was carried out relatively early in the trial period to capture any immediate and salient effects relating to implementation. For example, observations of smoking and vaping behaviours/prevalence were assessed before implementation and relatively soon after implementation to assess the relatively immediate effects and to monitor for any unintended consequences. Other factors, such as residents', business owners', and visitors' opinions and feedback about the zone were assessed weeks or months after the start of the trial period via face-to-face interviews, online surveys, and feedback cards.

Direct observation

Observational scans were used to assess the observed point prevalence⁹ of smoking and vaping in selected public spaces, prior to and during the Hanmer Springs trial. The method was informed by Thomson et al., (2013a) and Thomson and Pathmanathan (2016). A detailed description of the methods including variables, definitions, and selection of observation sites is available on request (a brief summary is provided in Appendix 1). In brief, a trial observation day in Hanmer Springs was completed in November 2018 to test the method and to refine the boundaries of the observation sites. On subsequent visits to Hanmer Springs, the observer conducted observation scans back-to-back, recording the number of smokers, vapers, adults, and children. Relevant supplementary information (e.g., weather and time) was recorded between each scan before moving to the next location. During each visit to Hanmer Springs, the observer also carried out a walking loop of the zone, reporting any smoking behaviors (including smoking and vaping) and noticeable smoking-related litter). Data analysis was conducted in Microsoft Excel to calculate the baseline and follow-up point prevalence. Chi-square tests were used to determine any differences in the observed prevalence of smoking and vaping between baseline and follow-up. The software SAS version 9.4 (SAS Institute Inc., Cary, NC) was employed for the statistical analyses.

Surveys

Four different surveys were used as part of the data collection for this evaluation (Table 1).¹⁰ The survey questions for the face-to-face interviews and the online questionnaires can be found in Appendices 2-5. Some sections of this report present findings from multiple data sources and these sections are identified and explained in each instance. All of the surveys included a combination of multi-choice and short answer formats and the interviews and surveys included attitudinal questions (opinions/viewpoints) as well as other aspects, as specifically relevant to the different stakeholder groups.

⁹ Point prevalence is the proportion of people smoking or vaping at a particular time.

¹⁰ Four surveys forming six data streams (surveys 3 and 4 each used two survey data collection methods, 3a/3b and 4a/4b respectively in Table 1).

For Survey 1 and Survey 3 (public, and in-zone business owners'/managers' survey), semi-structured face-to-face interviews were chosen to make use of the flexibility of the qualitative research process. The business interview schedules were developed using an applied qualitative research approach (Pope, Ziebland, & Mays, 2000). Specifically, common themes were developed that reflected those derived from previous surveying in Hanmer Springs (Cancer Society, 2018) and those reported in the tobacco control literature (for an overview see Katz, 2005). This method was chosen for this evaluation because the objectives of the investigation were essentially set in advance, as shaped by the information requirements of the stakeholders. Understandings that were developed early in the process were carried forward into subsequent interviews, thereby drawing out more detail as new issues emerged (Green & Thorogood, 2014). Survey 3 was then adapted and carried out online. The online version included the same refined questions as the semi-structured interviews (modified as necessary to fit the more structured online survey format). The survey link was sent out to businesses in Hanmer Springs via email, using an email list that had been gathered and collated by the Cancer Society health promoter through networks (e.g. the Hanmer Springs Business Association members list), web-based searches, and visits to the village. In addition, the survey link was circulated by Enterprise North Canterbury to their members' emails.

Data were downloaded from SurveyMonkey[®] into Excel, where further descriptive quantitative analysis was undertaken. The qualitative data (from all of the surveys) were coded by two analysts who had no role in the development of the Smokefree and Vapefree Zone programme plan, beyond evaluation. The data were analysed using a systematic iterative thematic approach to identify recurring patterns, following the method described by Pope and Mays and others (Green & Thorogood, 2014; Hanson et al., 2005; Liamputtong, 2013; Pope et al., 2000; Ritchie & Spencer, 1993). This report also made use of a hybrid 'quantification' approach for a limited number of analyses (Young, 1981). That is, some qualitative data (e.g., answers that were easily categorised into supportive or unsupportive/yes or no) were assigned quantitative values.

Table 1: Summary of surveys and methods

Survey & Number	Description	Key information
Public Survey 1	Opportunistic/point-intercept, face-to-face interviews with members of the public (residents, and domestic and international visitors) on the streets within the Hanmer Springs Smokefree and Vapefree Zone. n=189	 Awareness of the zone Opinions on smokefree and vapefree within t zone Opinions on making the zone permanent Proportion of respondents who smoke or vap Free-text comments
Feedback cards Survey 2	A pen-and-paper feedback card provided to guests staying at one of 22 accommodation providers in Hanmer Springs, between February and July 2019. n=548	 Awareness of the zone Opinions on smokefree and vapefree within the zone Ratings of the likelihood to visit other smokefree tourist spots Proportion of respondents who smoke or vap Free-text comments
Business Survey 3a&b	3a Face-to-face semi-structured interviews with in-zone business owners/managers.3b Online survey of out-of-zone business owners/managersn=54	 General comments re the zone Opinions on smokefree and vapefree within the zone Opinions on making the zone permanent Customer feedback Effects on staff Proportion of staff who smoke or vape Overall effect on business Visibility or prevalence of people smoking or vaping in the zone Free-text comments
Residents Survey 4a&b	4a Survey of Hanmer Springs residents and non-resident property owners via Facebook 4b Survey of Hanmer Springs residents and non-resident property owners via targeted email n=166	 Awareness of the zone Opinions on smokefree and vapefree within the zone Opinions on making the zone permanent Visibility or prevalence of people smoking or vaping in the zone Proportion of respondents who smoke or vap Free-text comments

Data presentation

Data are presented in tables and/or figures with accompanying descriptive text. Where respondents provided free-text comments, these are presented as a summary of common themes and categories, along with selected illustrative quotes.

RESULTS

Throughout this section, the evaluation findings are structured by survey/stakeholder group using the order set out in Table 1. First, findings for the core set of questions (mostly common to all four surveys) are presented, then any questions that were specific to a particular survey are presented. Finally, summaries of the themes and other qualitative information are included at the end of each section where applicable. The results section concludes with a summary of the observational data relating to smoking and vaping prevalence.

The sections are ordered chronologically with respect to the start date of each survey, although there was substantial overlap in the data collection periods. The findings for each survey are presented separately because the number of respondents, the methodologies used, and the contextual factors, all differ between the stakeholder groups. The qualitative and quantitative methods complement each other in providing a fuller picture of stakeholder perspectives on the implementation of the Smokefree and Vapefree Zone.

A *policy-relevant* approach

The *fundamental policyrelevant question* for this evaluation is whether to make the Smokefree and Vapefree Zone permanent.

Therefore, the qualitative findings presented across the results section are generally organised in terms of whether they are in support/not in support of the proposed policy. The more complex themes are then presented from the relevant stakeholders' perspectives.

Survey results

Survey 1 Public

Who? How many? Method What did they say?

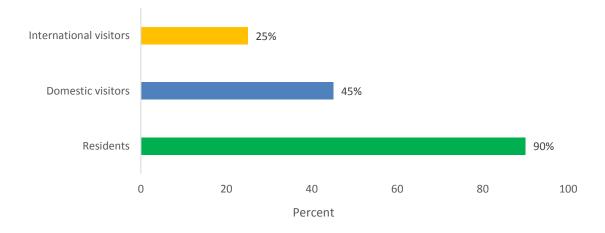
People on the street in Hanmer Springs 189 Point-intercept face-to-face interview Over half were aware of the zone (but low awareness among international visitors); most see smoking and vaping as the same (10% would allow vaping but not smoking); 90% think the zone should stay. Self-reported smoking prevalence was 4.7%.

Survey 1 was a survey of public opinion on the Smokefree and Vapefree Zone from people on the streets of Hanmer Springs (within the zone). Data were collected by an interviewer who approached potential respondents and asked if they were willing to complete the survey. Potential respondents were selected opportunistically, i.e., any adult who was available and willing to take part. Those interviewed (total n=189) included domestic visitors (n = 105, 55%), residents (n = 56, 29.6%), and international visitors (n = 28, 14.8%). Within the respondent group, nine individuals said they smoked and two said that they vaped (4.7% and 1%, respectively). The survey included multi-choice and short answer questions. Key questions covered the topics of *awareness* of the zone, whether smoking and vaping should be treated the same or differently within the zone, and whether the zone should become permanent (see Appendix 2 for survey questions).

Awareness

Respondents were asked to comment on their awareness of the zone, and if aware, how they became aware. The overall awareness across the three groups (residents, domestic visitors, and international visitors) was 55.5 percent (n=105 of 189 respondents). Of the 56 residents who responded to this question, 90 percent (n = 50) were aware of the zone. These respondents indicated that their awareness was generally via multiple sources, mainly via the signage, Facebook, and/or word-of-mouth. Figure 1 presents the proportion of respondents who were aware that Hanmer Springs has a Smokefree and Vapefree Zone, by group. Visitors to Hanmer Springs had substantially lower levels of awareness than residents. Less than half of the 105 domestic visitors (n=47, 45%) were aware of the zone. The most common ways in which domestic visitors reported being aware were the signs, mainstream media, or word-of-mouth. International visitors reported the lowest level of awareness (25%, n=7) and the signage was the only information source cited.

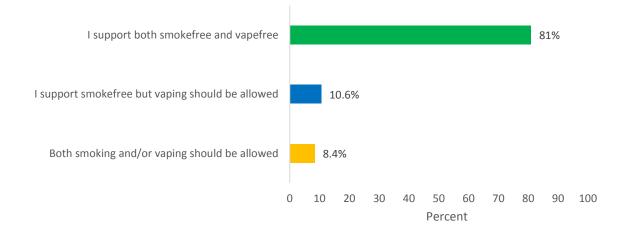
Figure 1: Proportion of respondents who were aware that Hanmer Springs has a Smokefree and Vapefree Zone, by group (n=189)



Smoke vs vape

Respondents were asked to give their opinion on whether the zone should be smokefree *and* vapefree, *only* smokefree, or neither. In part, this question prompted respondents to consider their position on vaping compared with their position on smoking. Figure 2 presents the responses to the 'smoke vs vape' question.

Figure 2: What do you think about the no smoking/no vaping zone in Hanmer Springs? (n=189)



The figure shows that 81 percent of respondents (n=153) indicated a preference for the zone to be both smokefree and vapefree. Twenty respondents (10.6%) differentiated between smoking and vaping, indicating that vaping should be allowed in the zone (but with smoking not supported) and 16 respondents (8.4%) indicated that they generally did not support the zone. The pattern was similar for residents and visitors (residents 84%, 7%, 9%; visitors 79.6%, 12%, 8.3%). International visitors appeared to be more accepting of vaping than domestic visitors

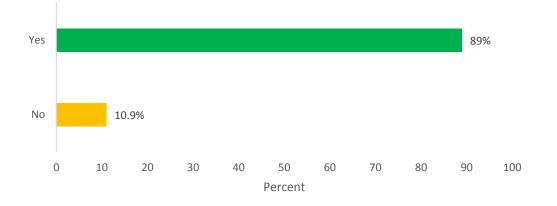
92% of respondents indicated their support for smokefree*

*supporting smokefree/vapefree or smokefree only (18% of international visitors supported smokefree but not vapefree, compared to 10.6% of domestic visitors).¹¹ Eight of the nine smokers interviewed supported the zone being smokefree.

In addition to their multi-choice answers, 12 respondents provided clarifying comments. Overall, these comments supported the view that both smoking and vaping were perceived similarly in public places. Respondents commented on 'health' and 'annoyance'. Two respondents' comments summarised the general views expressed on vaping: "[vaping] *still models addictive behaviour to children*" and is *"interfering with others' space"*, while accepting that vaping probably does not pose a physical health risk to others. Some respondents were less concerned about vaping, citing lower/minimal harms to users and others, and less impact on the environment (e.g., no butt litter). On the other hand, one respondent (who did not support the zone at all) suggested that smokers and vapers *"Just be respectful*" and that *"*[it's] *not a big deal*".

Stay or go

Respondents were also asked whether they thought the zone should become permanent after the end of the six-month trial. Figure 3 shows that nearly 90 percent (89%, n=163) of the respondents indicated a preference for the zone to become permanent. Twenty respondents (10.9%) indicated that the zone should be disestablished at the end of the trial period. The pattern was similar for residents and visitors. International visitors appeared to be more supportive of the zone than New Zealanders (96.4%, n=27 vs 87.6%, n=135, respectively).





Further comments (free-text responses)

Forty-one respondents provided additional comments to this question. Twenty-five of these comments were entirely supportive of the zone, with some citing Hanmer Springs' image/brand, health, comfort, and enjoyment as important factors for locals and visitors. Five respondents reiterated that vaping should be allowed in the zone, and three respondents expressed concern that the zone might have a negative effect on businesses. Eight respondents commented that they did not feel sufficiently informed to make a decision.

¹¹ Although the sample size for this breakdown was small (international visitors n=5; domestic visitors n=11)

Survey 2 Guests

zone.

Who?Accommodation guestsHow many?548MethodPen-and-paper questionnaireWhat did they say?Just under half aware of the zone (lower awareness among international visitors);
91% supported smokefree; 94% of respondents said they would be more likely or
as likely to visit other places in New Zealand that have no smoking/no vaping zones
(5.5% less likely); self-reported smoking prevalence was 4.8%. Half of smokers
supported the zone being smokefree but only 18% of vapers supported a vapefree

Survey 2 was a survey of accommodation guests' opinions on the Smokefree and Vapefree Zone, both from international and domestic visitors, staying in any of the 22 participating accommodation providers within the village. The survey used a pen-and-paper 'HAVE YOUR SAY' card¹² that was made available to guests primarily as an insert in tourist compendiums and via reception. In an attempt to gain feedback from Chinese tourists (an important and emerging market for the district), the reverse side of the feedback card was translated into Simplified Chinese. Of the 22 venues that agreed to display feedback cards, ten returned cards. The respondents (n=548) included 433 domestic visitors (79%) and 115 international visitors (21%). Fewer than five respondents answered via the Simplified Chinese card. Cards that were illegible, incorrectly filled out (e.g., all check-boxes ticked) or obviously duplicates, were excluded (n=16). The survey included multi-choice and short answer questions. Key questions covered the topics of awareness of the Hanmer Springs zone, support for the zone, whether smoking and vaping should be treated the same or differently within the zone, and whether respondents would be more or less likely to visit other places in New Zealand that have no smoking/no vaping zones (see Appendix 3 for survey questions). Within the respondent group, 26 individuals indicated that they smoked, 24 indicated that they vaped, and 11 respondents indicated that they both smoked and vaped (4.7%, 4.4%, and 2% respectively).

Awareness

Respondents (n=548) were asked to indicate their awareness of the zone with a simple tick-box yes/no question. Figure 4 shows that the overall awareness across the two groups (domestic visitors and international visitors) was 48.5 percent (n=266). Of the 433 domestic visitors who responded to this question, half (48.9%, n = 212) indicated prior awareness of the zone at the time of completing the survey card. Of those who identified as international visitors (n=115) 46.9 percent (n=54) were aware of the zone at the time of completing the survey card.

¹² The survey cards were printed double-sided: English on one side and in Simplified Chinese on the other.

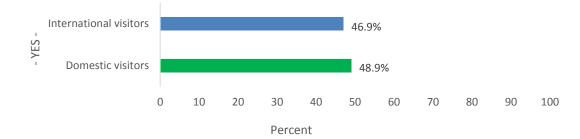
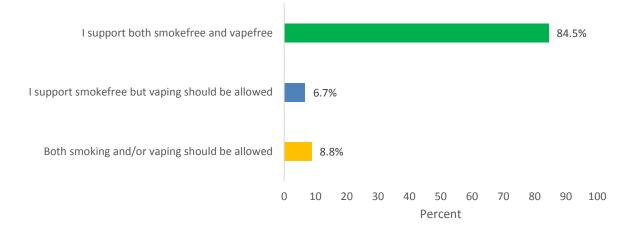


Figure 4: Were you aware that Hanmer Springs has a no smoking/no vaping zone? (n=548)

Smoke vs vape

Respondents were asked to give their opinion on whether they thought the zone should be smokefree and vapefree, only smokefree, or neither. In part, this question prompted respondents to consider their position on vaping compared with their position on smoking. Figure 5 presents the responses to the 'smoke vs vape' question.





The figure shows that 84.5 percent of respondents (n=463) indicated a preference for the zone being both smokefree and vapefree. Thirty-seven respondents (6.7%) differentiated between smoking and vaping, indicating that vaping should be allowed in the zone (i.e., with smoking not allowed) and 48 respondents (8.8%) indicated that they generally did not support the zone (indicating a preference for smoking and vaping to be allowed). Overall support for smokefree (including *"I support both no smoking and no vaping"* and *"I support no smoking but vaping should be allowed"*) was 91.2 percent. The pattern was similar for domestic visitors and international visitors.

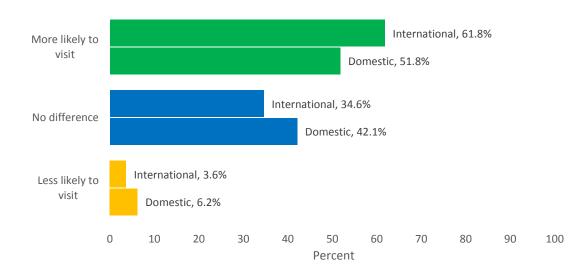
Likelihood to visit

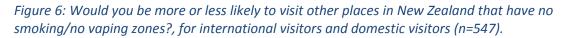
Respondents were also asked whether they would be *"more or less likely to visit other places in New Zealand that have no smoking/no vaping zones?"* The question was included in the accommodation

guests' survey cards in place of the more specific question "Should the Smokefree and Vapefree Zone in Hanmer Springs become permanent?", as used across the other three evaluation surveys (business, residents, public). The purpose of this question substitution was to explore respondents' views on Smokefree and Vapefree Zones in "key public spaces and tourist

94% of respondents said they would be more likely or as likely to visit other places in New Zealand that have no smoking/no vaping zones spots in other places in New Zealand", rather than enquiring specifically about respondents' level of support for a permanent zone in Hanmer Springs (which they may not have been fully informed about or invested in). If a visitor did not have prior awareness of the Hanmer Springs zone, they could still express an opinion about smokefree and vapefree zones.

Figure 6 presents the response to the *likelihood to visit* question. Overall, more than half of the respondents (54.3%, n=297 of 547), indicated that they would be more likely to visit a public space or tourist spot in New Zealand if that public space was smoke and/or vapefree (i.e., indicated a preference for smokefree and vapefree zones). Approximately 40 percent of respondents (40.2%, n=220) indicated that the smokefree/vapefree status of a tourist spot would make no difference to the likelihood of a future visit, and 5.5 percent of the respondents (n=30) indicated that a smokefree/vapefree zone would make it less likely that they would visit in the future. Figure 6 shows the responses of the international visitors and domestic visitors separately. A larger majority of international visitors indicated that they would be more likely to visit a smokefree/vapefree tourist spot than domestic visitors (61.8%, n=68/110 vs 51.8%, n=219/423, respectively).





Further comments (free-text responses)

In addition to their multi-choice answers, 61 respondents provided explanatory comments in relation to their support for smokefree/vapefree. A further 44 free-text responses were recorded under question three, *likelihood to visit*. All of these comments were pooled together, as preliminary analysis showed that the two sets of responses were qualitatively similar (i.e., the respondents tended to write similar comments in either text space on the survey card and few respondents made more than one comment, n=13). In total, 89 of the 105 comments were evaluable¹³ (summarised below).

¹³ Some comments were substantially off topic or contained no addition information beyond yes/no.

The comments generally conformed to the pattern of being clearly *supportive* or clearly *unsupportive* (i.e., were largely polarised), with some degree of elaboration, rationale, or position. The following two examples illustrate the typical response format:

- Supportive: "I do believe it's positive to have smokefree areas, especially around children and the elderly" [supportive + health and/or role modelling]
- Unsupportive: "Implementing such restrictions is taking away people's free will" [unsupportive + curtailment of free choice].

Supportive

The majority of comments were readily categorised as supportive and only a small number of comments were unsupportive.¹⁴ The most prominent supportive theme related to Hanmer Spring's image or brand – its 'natural alpine village environment'. Respondents commented that the zone enhanced Hanmer Springs' image or reputation as an environment with "*clean/fresh mountain air*", a "*beautiful place*", and "*a clean-and-green New Zealand destination*".

Another supportive theme related to *enjoyment* and the right for individual non-smokers to be left alone to pursue their own interests and activities. Many respondents who supported smokefree also expressed support for vapefree. These respondents commented that both smoking and vaping should be treated the same within the zone. While some respondents did acknowledge that vaping probably does not present a physical health risk to others, respondents still tended to group smoking and vaping together as generally undesirable behaviours.

The right for non-smokers to be let alone to pursue their own interests and activities "[smoking is] an unfair

imposition"

"Hate walking through a vape smoke cloud as much as walking through ciggy smoke"

"I think both habits are intrusive to others..."

"One policy is a good one..."

Respondents who supported the Smokefree and Vapefree Zone were also concerned about smokers and vapers influencing children via role modelling.

"Kids copy what adults do..."

Unsupportive

A small number of comments were readily categorised as unsupportive of the zone. The comments highlighted the same arguments commonly raised by pro-smoking agents in tobaccocontrol debates, such as excessive governmental power, and/or the use of social coercion (e.g., "nana state", "totalitarian state") and

Liberty "Outside you can do whatever you want to"

individual liberty rights (freedom to consume a dangerous product, the right to consume tobacco products in a public space) (Katz, 2005). Legal perspectives were also cited, for example, the zone *'victimises'* smokers for their choice to use a *'legal'* product.

¹⁴ No smoker or vaper made a supportive written comment.

Survey 3 Business

Who? Business owners and managers (in-zone and out-of-zone) How many? Method What did they say?

54 (response rate of approximately 36%) Face-to-face semi-structured interviews and online survey A majority of respondents (60%) supported the zone becoming permanent. Most respondents reported that the trial had no effect on their overall business and no major effects on staff. The most prominent unsupportive theme was a concern for the impact on Hanmer Springs' tourism and business, while a common supportive theme related to the right of non-smokers to enjoy Hanmer Springs' clean air. Twenty (37.7%) business owners/managers reported that at least one of their staff smoke or vape.

Survey 3 was a survey of business owners'/managers' perceptions of the impact of the zone on the business, and business owners'/managers' views about continuing the Smokefree and Vapefree Zone permanently. The survey was conducted through two different methods: face-to-face semistructured interviews with in-zone business owners/managers and via an online survey link emailed to out-of-zone business owners/managers. The online survey included the same questions as the semi-structured interviews, although some questions were modified to fit the more structured online survey format. Both the survey and face-to-face semi-structured interviews included multichoice and short answer questions. Key questions covered the topics of *effect* of the zone on business (including staff and customers), whether smoking and vaping should be treated the same or differently within the zone, the visibility of smoking and vaping in the zone, and whether the zone should become permanent (see Appendix 4 for survey questions). The survey also provided respondents with the opportunity to provide more in-depth written comments across nine questions within the survey (totalling approximately 341 comments).

The respondents (n=54) included face-to-face interviewees (n=23, 42.6%) and online respondents (n = 31, 57.4%). A majority (n=20, 69%) of the online respondents accessed the survey via the Canterbury DHB link and around 30% (n=9) of online respondents accessed the survey via the Enterprise North Canterbury link. The survey was limited to one response per device. Survey 3 had an estimated response rate of 36 percent (54 of the eligible 148 business owners and managers who were contacted and invited to complete an interview or survey).¹⁵ All business owners and managers were asked to provide the name(s) of the businesses associated with their response so that any duplicates could be removed. Of the fifty-four respondents, four represented two or more businesses (14 different businesses in total).

Respondents (n=54) included twenty-five business owners, seventeen managers, nine business owners/managers, and three authorised staff members. Within the respondent group, thirty-seven businesses were in zone and the remainder were out-of-zone (n=17). Twenty (37.7%) business owners/managers reported that at least one of their staff smoke or vape. The survey did not specifically ask respondents for their own personal smoking status as the survey was considering business factors for this question rather than individuals' smoking status.

Stay or go

Business owners/managers were asked to give their opinion on whether they thought the zone should become permanently smokefree and vapefree, specifically from a business perspective. The

¹⁵ The response rate is an estimate as the number of business owners/managers who received an email invitation is not known exactly due to possible errors, omissions, and non-current email addresses within the data base (although email 'bounce-backs' were included in the response rate calculations).

response options for the online survey were *yes, no,* or *don't know*. In both the online survey and face-to-face interviews, respondents were given the opportunity to provide further comments on their position. Figure 7 presents the responses to the 'stay or go' question, which all survey respondents answered (n=54).

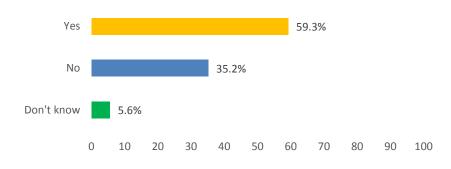


Figure 7: Should the Smokefree and Vapefree Zone in Hanmer Springs become permanent? (n=54)

The figure shows that 59.3 percent of respondents (n=32) indicated they supported the Smokefree and Vapefree Zone becoming permanent. Nineteen respondents (35.2 %) indicated that the zone

should be disestablished at the end of the trial period, a further three respondents (5.6%) were unsure. Overall, a majority of the respondents supported the zone, however out-of-zone respondents were slightly more supportive of the zone than inzone respondents (64.7%, n=11 vs 56.8%, n=21 respectively, data not shown).

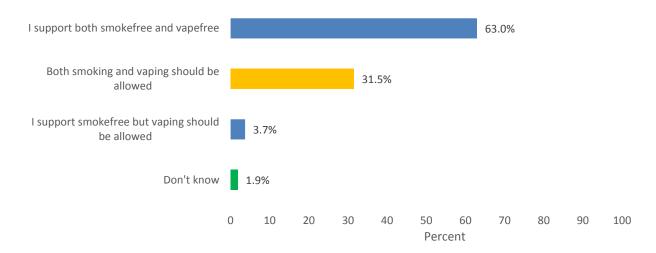
Approximately 60% of respondents supported the Smokefree and Vapefree Zone becoming permanent

In addition to the multi-choice answers, 33 respondents provided further comments to the 'stay or go' question, both from the face-to-face interviews (n=19) and online survey (n=14). A majority of respondents were in-zone businesses (n=27), while six respondents were out-of-zone. Content analysis of the written comments found an approximately half-and-half split of opinion (i.e., for vs against the zone becoming permanent). The most prominent supportive themes related to the 'annoyance' caused by smokers and that the Smokefree and Vapefree Zone was a "good fit with [the] village" as a clean-and-green New Zealand town. Several respondents also commented positively on the smokefree concept in general and one respondent suggested that Hanmer Springs was "leading by example and creating a precedent for others to follow".

Those respondents who were clearly against the zone mainly expressed concern about the possible impact to business and tourism in Hanmer Springs. Many respondents reported that business in Hanmer Springs had slowed down compared to previous years and respondents were concerned the zone might be a "deterrent to visitors" coming to the town. A few respondents went further and attributed the slow-down to the zone. One respondent believed a permanent zone would "kill tourism". Another theme within the unsupportive comments related to the curtailment of free choice (i.e., that individuals should have the freedom to make their own health decisions).

Smoke vs vape

Respondents were asked to give their opinion on whether they thought the zone should be smokefree *and* vapefree, *only* smokefree, or neither. In essence, this question prompted business owners/managers to consider their position on vaping compared with their opinion on smoking. Figure 8 presents the responses to the 'smoke vs vape' question, answered by all respondents (n=54).



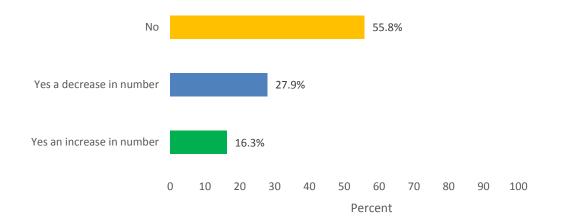


The figure shows that a majority of respondents (63%, n=34) indicated a preference for the zone to be both smokefree and vapefree. Seventeen respondents (31.5%) answered that both smoking and vaping should be allowed, indicating that they did not support the zone. Two respondents (3.7%) indicated that only vaping should be allowed in the zone and one respondent was not sure. Out-of-zone respondents were slightly more supportive of the zone in general, with 70.6 percent (n=12) indicating a preference for the zone to be both smokefree and vapefree, compared with 59.5 percent (n=22) of in-zone respondents.

Visibility/prevalence of smoking and vaping within the zone

Respondents were asked to describe any difference in the number of people typically seen smoking or vaping in the street outside of the business since the start of the trial (14 February 2019), using a three-point rating scale. Figure 9 presents the response to the change in visibility or 'prevalence' question, answered by 52 respondents (two respondents skipped this question), however nine respondents (20.9%) indicated that the question was not applicable to them (because of the nature/location of their business) and their data have not been included in the analysis.

Figure 9: Since the trial has started, have you noticed any difference in the number of people smoking and/or vaping in the street outside this business? (n=43)



The figure indicates that over half of the respondents (55.8%, n=24) did not notice any difference in the number of people smoking or vaping outside their business, since the trial began. A further 12 respondents (27.9%) indicated there was a decrease in the number of people smoking or vaping and 7 respondents (16.3%) reported an increase.

Thirty-two respondents provided additional comments describing the difference in the number of people vaping and smoking in the zone. A majority of these comments could be characterised as 'no change' in the visibility of smoking and vaping in the zone since the trial began. Most of these respondents still observed a relatively small number of people smoking or vaping in zone, while

others said that they did not usually see many people smoke in Hanmer Springs anyway. A further ten respondents observed noticeably fewer people smoking, and a number of these respondents cited fewer cigarette butts in the street. Four respondents observed noticeably more people smoking in the village, with one respondent suggesting that smokers were "taking a stand" against the zone.

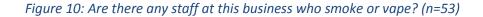
Noticeably less litter "Decreased by around 80% significant reduction. Cigarette butts have reduced dramatically"

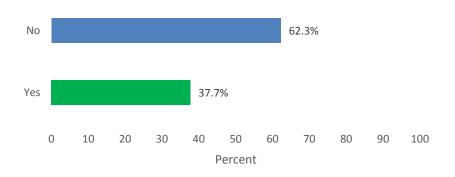
Business operation

The following section presents information that describes the impact of the zone on business. The questions explored customer feedback, customer behaviour (including numbers and habits), any indirect effects on staff, and smoking or vaping behaviours among staff.

Staff smoke or vape

Respondents were asked if there were any staff working at the business who smoke or vape. If the respondent answered yes, they were asked whether the zone changed where or when these staff members smoke or vape. Figure 10 presents the responses to the staff smoke or vape question.





The figure shows 37.7% (n = 20) of responding business owners/managers reported that at least one of their staff smoke or vape. While 62.3% (n = 33) reported that no staff smoke or vape.

Twenty-one respondents provided additional comments on whether they perceived the zone had changed where or when staff smoke. Half of these comments were simple yes/no type comments that contained no additional information. The remaining 10 comments illustrated two perspectives: (1) that the policy made no difference to where or when staff smoke or vape or (2) the policy made a positive difference. In the first scenario (no difference) this was either because the business already had a policy specifying that staff not smoke where visible by customers, or the policy made no difference because staff paid no attention to it. In the second scenario (difference) two respondents commented that a staff member was smoking less or had switched to vaping since the start of the zone trial.

Effect to business overall

Respondents were asked, overall, how they would rate any effects or changes to business since the start of the trial (e.g., considering customer numbers and any other changes). This question had three response options (*positive effect, negative effect,* and *no change*). Figure 11 presents the responses to the effect on business question, one respondent skipped this question (overall n=53).

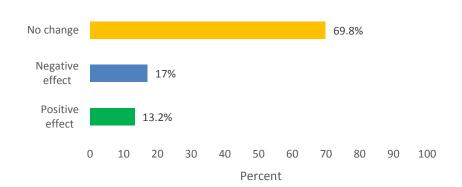


Figure 11: How would you rate any difference (effects/changes to the business) since the start of the trial? (n=53)

The figure shows that a majority of respondents (69.8%, n=37) indicated that the smokefree and vapefree trial had neither a positive nor negative effect on their business. On the other hand, nine respondents (17%) indicated that the trial had negatively impacted their business and a further seven respondents (13.2%) answered that the trial had a positive effect on their business.

Operational changes

Respondents were asked if the introduction of the Smokefree and Vapefree Zone trial had influenced any aspect of how they conducted their business. The question wording provided some examples of what this might include, such as going fully smokefree, extending outdoor seating, or extending designated smoking areas, or any other changes. Forty-eight respondents (89%) provided comments about the influence of the zone on their business operations. Three-quarters of the respondents (78%) indicated that the zone trial had not influenced their day-to-day business operations (or that the question was not applicable). Within these responses, 10 respondents indicated 'no' because their businesses were already completely smokefree or they had at least some smoking restrictions in place (or a designated area) and that these had not changed. Five respondents indicated that they had made a change to their business in some way as a result of the zone trial. These changes included encouraging a staff member to quit and offering help to quit,

reminding people about the zone, making customers more aware of not smoking in rooms, placing the [no smoking] stickers on the property, and asking guests not to smoke near the buildings. No respondents indicated that they had rearranged or reconfigured their business premises or services or added/removed a dedicated area or facility.

Reminding customers

"We have placed the stickers on our property and will point smokers to the sticker if they smoke, but we do not tell them to stop smoking or vaping, it is up to them"

70% of business owners/managers

business

reported the trial made

no difference to their

22

Customer feedback

Respondents were asked about any feedback they had received from customers regarding the Smokefree and Vapefree Zone (an open question in the interviews and a free-text response option in the online survey). Fifty-four respondents provided comments, and of these, 16 respondents indicated that they had not received any feedback from customers and three respondents' comments were not relevant to this question.¹⁶ The remaining 35 comments were further analysed and three general themes were evident: mixed support, misperceptions about the zone area, and misperceptions about enforcement.

Respondents' comments tended to take one of two forms: (1) entirely negative or (2) reporting both negative and positive feedback.

Both negative and positive

"Feedback I received came from both sides. The usual negative who think they have the right to smoke all over others (and still did) but also plenty who thought the idea was great because you could eat inside or outside without anyone smoking around you"

Negative

"Negative and not working. In your face notices everywhere telling you not to smoke. More resistant because of it"

Some reported feedback referred to the zone map and described confusion about the exact geographical coverage of the zone. Generally, these comments indicated that the extent/location of the zone was unclear to some customers (and also that some staff were unsure) and some had

Confusion of zone boundaries *"Many think that it applies to everything and all streets in Hanmer"*

assumed that the zone applied to the *whole village* or to *all streets* or to *the outdoors*. Finally, respondents indicated that customers' understanding of enforcement was variable and some customers had assumed that compliance was compulsory and enforced (i.e., that smoking would be illegal/an enforceable ban on smoking).

Customer behaviour

Respondents were asked to describe any differences that the trial might have had on customer numbers, customer behaviours, or anything else. Examples provided in the question included customers staying for a longer or shorter time, spending more or less money, or whether customers sat inside or outside (if relevant). A total of 50 respondents answered this question, and of these, most (41 respondents) answered that the zone had not made any noticeable difference to their customer numbers or behaviours. A small number of respondents (n=6) indicated that customer numbers had decreased and most attributed at least some of the decrease to the implementation of the Smokefree and Vapefree Zone. Respondents cited personal experience/impression, word-of-mouth and social media as the basis for their reasoning. One respondent noted *'less cigarette butts out the front'* and another, a *'decrease in smoking'*.

¹⁶ The comments were off topic and contained no comments/feedback from customers.

Effect on staff

Respondent were asked if the trial had any effect on staff, for example had they dealt with any comments or complaints, or challenges from customers. This question was multi-choice and also provided for a free-text response by asking what some of the effects were. Figure 12 presents the responses to the effect on staff question, two respondents skipped this question.

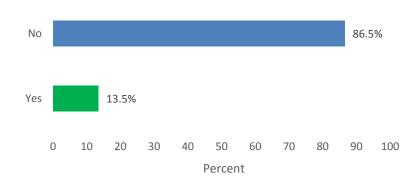


Figure 12: Has the Trial had effects on staff? (n=52)

The figure indicates that a large majority of respondents did not think the Smokefree and Vapefree Zone trial had any effect on staff, with 45 respondents (86.5%) holding this opinion. A further seven respondents (13.5%) indicated that the trial had an effect on staff.

Fifteen respondents provided additional comments relating to any effects on staff (i.e., burden). A majority of these responses were from in-zone businesses, with only two out-of-zone businesses providing further comment. Half of the respondents reiterated that the zone trial had not caused any effects on staff (either positive or negative). The remaining comments all related to customer interactions (some positive, some negative). Generally, these interactions involved responding to queries about the zone (e.g., where is it? what does it mean?) or the interactions involved

responding to negative comments or verbal complaints. One respondent reported that a customer was 'a bit bothered' during an interaction and another respondent indicated 'verbal abuse' from a customer. Overall, these respondents indicated that the burden created by these staff-customer interactions was relatively minor (e.g., 'had to deal with comments ... No effect on them though').

Customer comments "Staff had to deal with comments about where they are allowed to smoke. No effect on them though"

Opinion

Further comments (free-text responses)

Respondents were asked their general opinion of the Smokefree and Vapefree Zone trial and respondents were also asked to provide final comments at the end of the survey, both of these questions also invited free-text responses. Fifty-three respondents answered the 'opinion' question and a further 35 provided evaluable responses within the final comments. These comments were pooled together, as preliminary analysis showed that these sets of responses were similar (i.e., respondents were commenting on their overall thoughts on the initiative in both sets of responses). In total, 80 responses were evaluable and a majority of these could clearly be coded as supportive *or*

unsupportive comments (with the supportive slightly outweighing the unsupportive). A small number of comments were relatively neutral towards the zone or the smokefree concept. This group of neutral respondents generally made conditional comments or provided recommendations or suggested improvements to the zone.

Supportive

Among supportive responses, three clear themes emerged, and these tended to identify grouporientated views, rather than issues of an individual nature. The first theme was characterised by general support for the zone as a "great idea" and "good initiative". Some respondents mentioned that they support the zone becoming permanent and highlighted that it is a long-term vision, and it will take time for it to become 'normal' and accepted. Other respondents supported the smokefree/vapefree concept in general and were hopeful that other townships would adopt a similar policy.

> "Good concept. Need to be realistic about timeframes to become 'normal' "Stick with it! Long-term"

"Good concept. Like to see it go through bigger townships"

Another prominent supportive theme related to the rights of non-smokers to enjoy the outdoor space and not be exposed to the harms of smoking. Respondents identified that this was especially important for younger children and visitors to Hanmer Springs who come to relax in the town. A few of these respondents said the Smokefree and Vapefree Zone made the township more pleasant, particularly when walking and dining outside.

"It's a good idea. Less exposure to people smoking the better especially for younger generation. Helps ex-smokers to get over it"

"I think it's fantastic. We should be able to enjoy our outdoor spaces with fresh air"

Some respondents who supported the Smokefree and Vapefree Zone shared recommendations they felt would improve the effectiveness of the zone, these included improvements to signage, branding, and enforcement of the zone. Some of these respondents still observed smoking and vaping within the zone. Other supportive respondents mentioned some concerns they had relating to the impact on visitors and business.

Less exposure to smoke "I think it's great. Nothing worse than having [to] walk past people smoking"

"Think it's wonderful. Still see people vaping outside the shop. Smoking, litter. Not enough signage. Visitors need to know"

"I don't mind it but you hear people say things like I'm not going to Hanmer Springs, you can't smoke there"

On the other hand, some respondents thought the zone would not change the number of visitors substantially and was unlikely to impact on their business (with net positive effects being possible).

"While I heard one person had said they wouldn't come to Hanmer because of the zone, I think a lot more will come because of it"

Unsupportive

The most prominent theme was a concern for the impact on Hanmer Springs' tourism and business. Some respondents were concerned the zone might impact business and visitor numbers, while others felt the zone had already impacted tourist numbers. A few respondents said the media incorrectly portrayed the trial as a *ban* causing *"hardship to businesses"*.

> "We are a tourist town, and need as many people as possible to visit our beautiful area. We now have serious competition from other areas in the South Island, and cannot afford to be picky on who comes here"

"Business has been poor over the past 12 months but can't specifically say it [is] affected by the smokefree zone trial"

Opponents of the zone also commented on the ineffectiveness of the zone suggesting that a lack of

enforcement and awareness was to blame. The comments highlighted that some people were still smoking and vaping within the zone because they did not know about the zone or misunderstood where it was. Signage was often critiqued, for example the signs were "too small" and "needed to be improved".

"What's the point? There's no enforcement"

"People won't stop smoking in the zone because they aren't aware of the zone"

A further theme related to the curtailment of smokers' freedoms and individual rights. These comments were characterised by strong statements opposing government control/regulation, complaints that the zone was "*dictating to people*", and restricting "*individual choice*".

"People have a right to smoke and there are no harms of vaping"

"If people can afford to smoke let them... The streets and parks are public spaces and anything legal should be acceptable"

"Even though I am a non-smoker, I resent the amount of control that is being put on individuals and how we live our lives"

Neutral

A small number of comments were relatively neutral towards the zone and/or the smokefree/vapefree concept. This group responded to the zone proposal with conditional responses or provided recommendations or improvements to the zone. The most common critique of the zone was that the signage was not prominent enough, leading to an ineffective initiative. A number of these respondents suggested they support the smokefree/vapefree concept, but did not necessarily support the Hanmer Springs zone, for instance:

"it's a good idea but ineffective"

"Signage not effective. If people arrive in Hanmer, they won't look at the signs"

Portrayal in the media

"The negative media reporting was destructive for the image of Hanmer Springs"

Unclear messaging "I don't think the message is clear. People think it is a ban"

Survey 4 Residents

Who? How many? Method What did they say? Residents of Hanmer Springs (including non-resident property owners) 166

Online survey, linked via Facebook and other community networks Almost all were aware of the zone, most respondents see smoking and vaping as the same, most respondents were unsure if the visibility of smoking and vaping within the zone had changed, but most supported the zone. Overall, supporters of the zone tended to place the most importance on the 'concept' of smokefree generally, or being seen as a smokefree destination, rather than focusing on negative health effects of smoking/vaping.

Survey 4 was a survey of residents' and property owners'¹⁷ opinions on the Smokefree and Vapefree Zone. The survey was conducted online via Facebook¹⁸ in response to posts on the Hanmer Springs

Notice Board¹⁹ and the Hanmer Springs Discussion Board²⁰ (n=145).²¹ In addition to the responses received via Facebook, 21 responses were collected via other community networks (4 respondents accessed the survey via the community board newsletter/Pinkie, 4 respondents via community clubs, and 13 respondents via links in school newsletters). The survey was limited to one response per-device, and respondents who did not initially identify as a resident or property owner/Hanmer Springs rate payer were sent to a page that explained they were not eligible to complete the survey (approximately 20% of respondents accessing via Facebook). Respondents included 126 residents (75.7%) and 40 other eligible parties (24.2%).

The survey included multi-choice and short answer questions. Key questions covered the topics of *awareness* of the zone, whether smoking and vaping should be treated the same or differently within the zone, *visibility* of smokers/vapers on the streets within the zone (prevalence), and whether the zone should become permanent (see Appendix 5 for survey questions). The survey also provided the opportunity for respondents to provide more in-depth written

Hanmer Spring community pages (Facebook)

The Hanmer Springs Notice Board and the Hanmer Springs Discussion Board are both closed Facebook groups (i.e., to view the group's content you have to request to become a member and be accepted by the group's administrator), predominately used by Hanmer Springs businesses, residents and the wider community. The Notice Board group allows members to post information on local current affairs, events, services and other relevant information. Whereas the Discussion Board is predominately a place for discussion about local community ideas, proposals or policies, and not for advertising services. The Notice Board group has over 7,000 members, indicating that a majority of group members are unlikely to reside in Hanmer Springs (given the usually resident population of the town is approximately 1,000). While the Discussion Board has just over 1,000 members, indicating the members are more likely to be Hanmer Springs' residents.

¹⁷ Property or business owners/Hanmer Springs rate payers.

¹⁸ Not hosted on Facebook but via a link posted to two Facebook groups.

¹⁹ www.facebook.com/groups/1509089869343864/members/

²⁰ https://www.facebook.com/groups/HanmerSpringsDiscussionBoard/

²¹ Of the 145 eligible, 17 answered only the first question and were not included in the analysis.

comments.²² Within the respondent group, 20 individuals said they smoked and 10 vaped (12.1% and 6%, respectively).

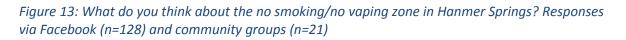
Note: Limitations specific to the Facebook-linked survey method are outlined in the **Discussion**.

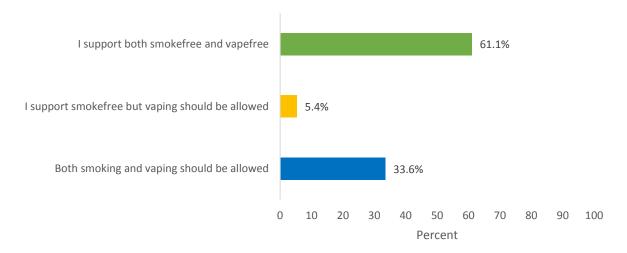
Awareness

Respondents were asked to comment on their previous awareness of the zone, and if aware, how they became aware. The overall awareness across the resident/property owners group was 97.2 percent. These respondents indicated that their awareness was generally via multiple sources, although mainly via social media (over half) and/or word-of-mouth, signs and mainstream media.

Smoke vs vape

Respondents were asked to give their opinion on whether they thought the zone should be smokefree *and* vapefree, *only* smokefree, or neither (multi-choice). In part, this question prompted respondents to consider their position on vaping compared with their position on smoking. Figure 13 presents the responses to the 'smoke vs vape' question for those who responded via Facebook along with those who responded via community links.





The figure shows the combined results for the Facebook group (n=128) and community group respondents (n=21). Sixty-one percent of respondents (61.1%, n=91) indicated a preference for the zone to be both smokefree and vapefree. Fifty respondents (33.6%) indicated that they generally did not support the zone and eight respondents (5.4%) differentiated between smoking and vaping, indicating that vaping, only, should be allowed in the zone.

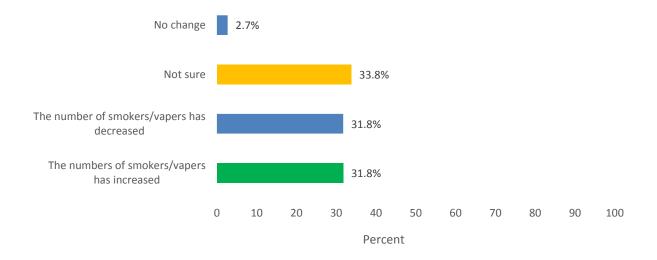
Visibility/prevalence of smoking and vaping within the zone

Respondents were asked to describe any difference in the number of people typically seen smoking or vaping in the zone since the start of the trial (14 February 2019), using a three-point rating scale.

²² Note that comments posted directly to Facebook were not monitored or recorded, only those comments provided via the survey platform were recorded.

Figure 14 presents the responses to the visibility²³ or '*prevalence*' question for those who responded via Facebook along with those who responded via community links.

Figure 14: How would you describe any difference in the number of people you might see smoking or vaping in the zone, on a typical day in Hanmer Springs, since the start of the trial (Valentine's Day 2019)? Responses via Facebook (n=127) and community groups (n=21)



The figure indicates that respondents' perceptions of smoking and vaping prevalence were divided reasonably evenly between decreased, no-change, and unsure.²⁴ Some free-text responses suggested that a degree of 'displacement' may have occurred. The respondents indicated that some smokers/vapers (identified as staff/locals) now smoked just beyond the zone boundaries and this may have made the assessment of in-zone/out-of-zone smoking and vaping difficult for some observers.

²³ The phrase "the number of people you might see smoking or vaping in the Zone" was used to capture respondents' general impressions rather than to assess numerical prevalence.

²⁴ These results suggest that this measure of perceived smoking and vaping prevalence may not be sufficiently sensitive to highlight any change.

Stay or go

Respondents were also asked whether they thought the zone should become permanent after the end of the six-month trial. Figure 15 presents the responses to the 'stay or go' question for those who responded via Facebook along with those who responded via community links.

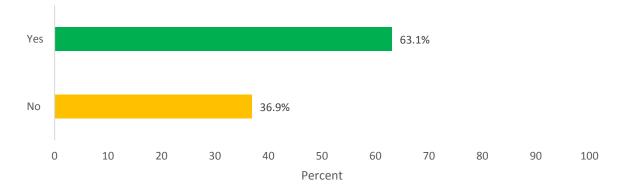


Figure 15: Should the Smokefree and Vapefree Zone in Hanmer Springs become permanent? Responses via Facebook (n=128) and community groups (n=21)

The figure shows that 63.1 percent of respondents (n=94) indicated a preference for the zone to become permanent and 36.9 percent (n=55) indicated that the zone should be disestablished at the end of the trial period. None of the 20 respondents who were smokers supported the zone. Six respondents vaped but did not smoke, and of these only one supported the zone.

Further comments (free-text responses)

In addition to the multi-choice answers, 27 respondents provided explanatory comments in relation to question 3 'Smoke vs vape', 38 free-text responses were submitted under question 4, 'stay or go', and 50 free-text responses were submitted as general comments. All of these comments were pooled together, as preliminary analysis showed that the three sets of responses were qualitatively similar (i.e., the respondents tended to write similar comments in any of the free-text boxes on the survey page and few respondents made more than one comment, n=20). In total, 115 comments were evaluable²⁵ and 67 were readily coded as supportive or non-supportive (and contained additional information). Overall, the comments were divided approximately evenly between supportive and unsupportive themes.²⁶

Supportive

Overall, the supportive responses tended to be focused on the collective, rather than on individuals. There was also clear recognition that the Hanmer Springs context is significantly defined by its 'tourist town' status. One prominent theme described the importance of upholding the rights of non-smokers to be left alone to pursue their own interests and activities (including protecting nonsmokers from the harms associated with second-hand smoke, particularly for children). While there was acknowledgment that vaping probably does not present a significant physical health risk to

²⁵ Six comments were substantially off topic or contained no addition information beyond yes/no and were not included.

²⁶ These may or may not have corresponded with respondents' multi-choice answers but were evaluated on their free-text content.

others, respondents commented on the 'offence' caused by smokers and vapers alike. Respondents indicated that applying the same rules to both activities simplifies the policy and guards against the potential for vaping "taking off".

"People have the right to smoke but not at the cost of others. Second hand smoke and its effects are a known killer and I don't want my family exposed"

"I find them [smoking/vaping] offensive, especially smoking, where the smell is more potent"

In addition, many respondents indicated that they see the zone as part of a long-term vision, not necessarily as an immediate transformation. Some respondents specifically referenced New Zealand's Smokefree 2025 goal, and that Hanmer Springs has an opportunity to demonstrate leadership in smokefree policy generally. Others proposed extending the zone and/or strengthening the policy enforcement.

Vision

"What a great opportunity to commit to the national vision of a smokefree Aotearoa by 2025!"

"If we hang in there it will soon become the norm for everyone and won't that be worth celebrating"

"Someone (some town) has got to lead the way for other towns/cities to follow. It's a good fit for the community too - one that promotes an active lifestyle ..."

Finally, one overarching theme centred on Hanmer Springs' 'healthy environment' image, and the advantage that the smokefree and vapefree policy provides, as a marketable point-of-difference, that will ultimately attract tourists to the village.

"Keeping our village smoke/vapour free re-inforces the healthy environment the hot pools, outdoor pursuits and forest walks etc. which are so important to the tourists and residents. It is an image our alpine village portrays"

"Great way to market Hanmer Springs as a healthy destination"

Overall, supporters of the zone tended to place the most importance on the image of smokefree, or being seen as a smokefree destination, rather than focusing on negative health effects of smoking/vaping.

Unsupportive

Two different styles of response were identified within the unsupportive comments regarding the zone. Firstly, some respondents provided long comments that included both supportive and

unsupportive arguments, but ultimately conveyed a nonsupportive position. Secondly, some respondents provided comments that were clearly oppositional. These responses were characterised by strong statements of individual freedoms, complaints about the curtailment of free choice/liberty, and

It's a free world "If it's not illegal it shouldn't be banned. Freedom of choice" arguments of legality. Other respondents commented on the lack of enforcement and thus the ineffectiveness of the zone (therefore a perceived waste of resources), and others expressed concerns for tourism. These respondents typically expressed strong opposition and views focused on impact of the trial zone on individuals, rather than group-oriented views. Respondents in this group also commonly indicated that they were personally unlikely to change. No respondent who smoked endorsed the zone (either via multi-choice answers or with free-text).

"They can try ban it as much as they want but it ain't going to stop anyone from smoking in the zone, ESPECIALLY me!!!"

"It's a free world. You're literally saying we can't smoke outside! It's ridiculous, people can't even smoke outside at bars when drinking on a Saturday night?!!"

"Because it should be an intervals [sic] choice to smoke in a public place"

Opponents of the zone also characterised the proposal as *stupid*, *pointless*, *picky*, *silly*, *dictating*, *babying*, and *a waste of time* and *s*ome respondents also stated that there had been insufficient consultation.

"So what, everyone has to hide like teens hiding from the teacher again just because of your stupid rule?"

Key findings by group: Infographic

This infographic summarises stakeholders' thoughts and attitudes towards the zone highlighting that different groups' perspectives influence their views towards the Smokefree and Vapefree Zone.



Breathe Easy in Hanmer Springs

Evaluation of the smokefree and vapefree trial 2019

Hanmer Springs, an alpine tourist centre in the South Island, recently trialed a voluntary smokefree and vapefree zone across designated retail/business streets and adjacent public spaces (over a sixmonth period). The smokefree and vapefree zone was the result of a collaborative partnership with the Cancer Society, the Canterbury DHB, local council, businesses, and the community.

The evaluation^a of the Hanmer Springs smokefree and vapefree zone was undertaken following a request from the Cancer Society. The evaluation used a mixed-methods design which involved the collection and analysis of information from nearly 1,000 respondents. The overall aim of the evaluation was to assess and report on the general levels of awareness of the zone, the attitudes of stakeholders, the overall level of support for the continuation of the zone, smoking/vaping prevalence, and any unintended consequences of the zone.

^a The evaluation was conducted by the Information Team from Community and Public Health (a division of the Canterbury District Health Board). The evaluators had no role in the development of the smokefree and vapefree zone programme plan or implementation.



Additional evaluation findings Would visitors* be more or less likely to visit EVALUATION METHODS other places in NZ that have smokefree and vapefree zones? 197 responded online 54% More likely to visit No difference 40% 548 completed feedback cards Less likely 5% 212 were interviewed face-to-face 0 50 100 10 hours and 46 minutes of field observations *Only includes visitors who responded via feedback cards (total respondents = 547). Example comments "Someone (some town) has "If it's not illegal "I think it's fantastic. got to lead the way for other it shouldn't be We should be able towns/cities to follow. It's a banned. to enjoy our outdoor good fit for the community too - one that promotes an active lifestyle" (Resident) Freedom of spaces with fresh choice" air" (Business owner) (Resident) "Good concept. One policy Need to be realistic "It is what is best for [smokefree and about timeframes to the community not become 'normal' vapefree] is a the smokers" Stick with it! Longgood one..." (Resident) term" (Visitor) (Business owner) "We are a tourist town, and need as many people as "I think both habits possible to visit our beautiful area. We now have are intrusive to serious competition from other areas in the South Island, and cannot afford to be picky on who comes here" (Business owner) others..." (Visitor)

Field observations: smoking/ vaping prevalence

Field observations were conducted over five weekend days (in two periods) and all coincided with school holidays. A total of 7,034 adults were counted. During the first observation period (prior to the trial), 2% of adults were observed smoking and vaping in the zone and, for the second period (during the trial), this proportion was approximately 0.5%**. Walking loops were also conducted in the zone, and clusters of smoking behaviours were observed in green spaces within the village, including playgrounds. Substantial cigarette litter was visible outside the cafés and bars along Jack's Pass Road and Conical Hill Road.

*Observed outdoors, in specified public spaces (not necessarily a measure of the proportion of people who smoke and/or vape in Hanmer Springs on any given day). **Overall, 110 smokers/vapers were observed 'in-zone' during the field observation scans and walking loops.

Community & Public Health (a division of the Canterbury District Health Board)	Canterbury
310 Manchester Street, PO Box 1475, Christchurch	District Health Board
Telephone: 033641777, Web: www.cph.co.nz September 2019	Te Poari Hauora ō Waitaha

Observational results

Smoking and vaping point-prevalence

Field observations were conducted over five weekend days (in two periods) and all coincided with school holidays. A total of 7,034 adults were counted during 10 hours and 46 minutes of field observations. During the first observation period (prior to the trial: January 12th-13th and 19th) approximately two percent of adults were observed smoking or vaping in the zone, and for the second period (during the trial: April 20th and 26th), this proportion was 0.4 percent. The difference between the observed smoking prevalence (point prevalence)²⁷ at baseline and follow-up is statistically significant for both smoking and vaping combined and for smoking separately (p<0.001 for both tests). The vaping data are based on small counts and so are not sufficiently reliable for significance testing (i.e., for vaping only).

Walking loops were also conducted in the zone, and clusters of smoking behaviours were observed in green spaces within the village, including playgrounds, and picnic spots, tables and park benches. Across all observations (field observation scans, walking loops, and casual observations), a combined total of 110 smokers/vapers were observed during the site visits. Substantial cigarette litter was also visible outside the cafés and bars along Jack's Pass Road and Conical Hill Road.

The point prevalence of smoking at different sites in Hanmer Springs varied, and showed a similar pattern at both time-points (Table 2). The highest pre-trial observed smoking/vaping point-prevalence was recorded near the Hanmer Springs Thermal Pools and Spa (3.8%), followed by the area near the Four Square/picnic area (2.0%) (see example observation site Figure 16). The lowest pre-trial smoking/vaping prevalence was observed on the footpaths outside the retail shops near the Conical Hill/Chisholm Road intersection (0.4%). Contextual recording by observers (Table 3) included such data as the weather conditions, the general level of activity across the village (e.g., the number of visitors to the thermal pools complex, based on pool admission data as well as observers' subjective estimates of activity within the village). The observers also recorded the characteristics of the sites, such as the type of business or range of entertainment activities nearby, and any nearby buildings or businesses that require people to exit in order to smoke (e.g., the footpath outside the hot pools entrance). These contextual variables were used to provide a general overview of the environment and to check the comparability of the test-retest findings. Overall, these observational data indicate that the zone trial was associated with a reduction in the proportion of adults visibly smoking or vaping within the zone.

²⁷ Observed outdoors, in specified public spaces (not necessarily a measure of the proportion of people who smoke and/or vape in Hanmer Springs on any given day). Point prevalence is therefore based on the pooled counts of observed behaviours, across a number of observational scanning periods.

	Baseline			During trial		
Site	Point prevalence of smoking & vaping (counts)	Point prevalence of smoking (counts)	Point prevalence of vaping (counts)	Point prevalence of smoking & vaping (counts)	Point prevalence of smoking (counts)	Point prevalence of vaping (counts)
Site 1	3.89% (29/745)	3.62% (27/745)	0.27% (2/745)	1.2 % (6/499)	1.0 % (5/499)	0.2 % (1/499)
Site 2	2.04% (21/1,029)	1.85% (19/1,029)	0.19% (2/1,029)	0.6 % (7/1,264)	0.6 % (7/1,264)	0.0 % (0/1,264)
Site 3	1.16% (11/947)	1.06% (10/947)	0.11% (1/947)	0.1 % (1/934)	0.0 % (0/934)	0.1 % (1/934)
Site 4	0.35% (2/571)	0.35% (2/571)	0.00% (0/571)	0.1 % (1/1043)	0.1 % (1/1,043)	0.0 % (0/1,043)
Overall	1.91% (63/3,292)	1.76% (58/3,292)	0.15% (5/3,292)	0.4 % (15/3,740)	0.3 % (13/3,740)	0.1% (2/3,740)

Table 2: Comparison of point-prevalence between baseline and follow-up observations

A total of 110 smokers/vapers were observed during the observations (total of all times/locations) **Site 1:** Footpath and pedestrian crossing outside Hanmer Springs Thermal Pools & Spa near smokers' bench. Both sides of the road; **Site 2:** footpath outside Four Square Supermarket– opposite side of road the footpath and picnic tables/seating in the park; **Site 3:** footpath on both sides of road mid-way up the Conical Hill Road: outside Hanmer Springs Adventure Centre; **Site 4:** Both corners of the T-intersection between Chisholm Avenue and Conical Hill Road.

Weather	Proportion of children observed	Other contextual variables	Walking loop counts*	Customer numbers at Thermal Pools
15-18°C Overcast with light drizzle	19.2 %	Town busy until 3pm despite the weather, market.	5 smokers, 0 vapers	3,055 6 smoking passes given
22°C Sunny to overcast; light wind to gusty winds	18.9 %	Reasonably busy from 10am – 1pm, then town quieter. No market.	2 smokers, 0 vapers	2,432 4 smoking passes given
23-25°C Sunny and muggy predominantly. A short period of cloudy and drizzle; light to gusty winds	21.2 %	Town busy, market.	2 smokers, 1 vaper	3,571 12 smoking passes given
14-17°C Partly cloudy to cloudy; light breeze to windy	17.6 %	Easter weekend. Town very busy but no market.	4 smokers, 1 vaper	4,130 Smoking passes unknown
16-20°C Mostly sunny; light breeze at times	22.1 %	Day following public holiday. Town very busy but no market.	3 smokers, 0 vapers	3,183 Smoking passes unknown
	15-18°C Overcast with light drizzle 22°C Sunny to overcast; light wind to gusty winds 23-25°C Sunny and muggy predominantly. A short period of cloudy and drizzle; light to gusty winds 14-17°C Partly cloudy to cloudy; light breeze to windy 16-20°C Mostly sunny; light breeze	of children observed15-18°C Overcast with light drizzle19.2 %22°C Sunny to overcast; light wind to gusty winds18.9 %23-25°C Sunny and muggy predominantly. A short period of cloudy and drizzle; light to gusty winds21.2 %14-17°C Partly cloudy to cloudy; light breeze to windy17.6 %26.20°C Mostly sunny; light breeze22.1 %	of children observedvariables15-18°C Overcast with light drizzle19.2 %Town busy until 3pm despite the weather, market.22°C Sunny to overcast; light wind to gusty winds18.9 %Reasonably busy from 10am – 1pm, then town quieter. No market.23-25°C Sunny and muggy predominantly. A short period of cloudy and drizzle; light to gusty winds21.2 %Town busy, market.14-17°C Partly cloudy to cloudy; light breeze to windy17.6 %Easter weekend. Town very busy but no market.16-20°C Mostly sunny; light breeze at times22.1 %Day following public holiday. Town very busy but	of children observedvariablesloop counts*15-18°C Overcast with light drizzle19.2 %Town busy until 3pm despite the weather, market.5 smokers, 0 vapers22°C Sunny to overcast; light wind to gusty winds18.9 %Reasonably busy from 10am - 1pm, then town quieter. No market.2 smokers, 0 vapers23-25°C Sunny and muggy predominantly. A short period of cloudy and drizzle; light to gusty winds21.2 %Town busy, market. and muggy predominantly. A short period of cloudy to cloudy; light breeze to windy17.6 %Easter weekend. Town very busy but no market.4 smokers, 1 vaper16-20°C Mostly sunny; light breeze at times22.1 %Day following public holiday. Town very busy but3 smokers, 0 vapers

Table 3: Summary of contextual variables, by observation period, Hanmer Springs, 2019



Figure 16: Example observation site, footpath outside Four Square Supermarket, both sides of the road, including the park area. Observer positions highlighted in red.

DISCUSSION

Evaluation overview

Hanmer Springs, an alpine tourist centre in the South Island, recently trialled a voluntary Smokefree and Vapefree Zone across designated retail/business streets and adjacent public spaces (over a sixmonth period). The Smokefree and Vapefree Zone was the result of a collaborative partnership with the Cancer Society, the Canterbury DHB, local council, businesses, and the community.

The overall aim of this evaluation was to assess and report on the general levels of awareness of the zone, the attitudes of stakeholders, the overall level of support for the continuation of the zone, observed smoking/vaping prevalence within the zone, and any unintended consequences. The evaluation used a mixed-methods design, which involved the collection of information via multiple channels and different survey methods/formats to increase the reach of the data collection across the different stakeholder groups.

The primary purpose of this evaluation was to gather information which could inform the local authority in its decision-making with regard to the Hanmer Springs Smokefree and Vapefree Zone (essentially, whether the zone, as trialled, should become permanent). To this end, the evaluation sought detailed accounts of stakeholders' thoughts and attitudes towards the zone, and the evaluation summarises, collates, and presents these findings to illustrate the different groups' perspectives.

Summary findings

Data were collected from 681 visitors to Hanmer Springs, 222 residents/property owners in Hanmer Springs, and 54 local business owners/managers. One hundred and ninety-seven responded online, with 548 respondents completing feedback cards at accommodation providers and 212 interviewed face-to-face. In addition, the evaluators conducted almost eleven hours of field observations.

The evaluation clearly shows that a large majority of respondents support the Hanmer Springs Smokefree and Vapefree Zone. It is also clear that perspective matters. For example, many business owners view the zone from the perspective of *enterprise* (i.e., are interested in visitor numbers and profit), whereas most visitors view the zone form the perspective of *experience* (i.e., are interested in amenity). This evaluation does not provide a framework to organise or rank or weight the different perspectives, as this is seen as a function of the decision-making process.

Awareness

An objective of this evaluation was to assess how visible, clear, and understood the smokefree and vapefree signage was within this zone.²⁸ This was primarily assessed through the awareness question in the surveys, as well as by analysing free-text comments that specifically mentioned signage. Awareness of the zone was generally high among residents and was universal among business owners. However, less than half of the visitors surveyed were aware of the zone. Furthermore, international visitors reported the lowest level of awareness and relied on signage to learn about the zone. This was despite many accommodation providers having information and a map of the zone either in rooms or elsewhere on the premises. Several respondents (across all groups) described confusion about the exact coverage of the zone. Generally, these comments indicated that the

²⁸ See Appendix 6 for examples of signage within the zone.

location of the zone was unclear to some and many had assumed that the zone applied to the whole village.

Designing clear and specific signage is a common challenge facing voluntary smokefree area policies. The quality of smokefree signage in New Zealand playgrounds has been compared with signage banning dogs in the same locations (Wilson & Thomson, 2016). This study found the smokefree signage was smaller in size, wordier, and lacked specific detail regarding the boundary of the smokefree area. On the other hand, when smokefree signage is designed well it can lead to a decrease in public smoking behaviour (Platter & Pokorny, 2018). In this evaluation, the overall awareness among visitors was low and respondents indicated uncertainty about the coverage (i.e., area) of the zone. Given that visitors to Hanmer Springs may only be in the village for hours or days, prominent and clear signage would appear to be necessary to maximise the likelihood that visitors become aware of the zone within their typically short time in the village.

Different groups, different beliefs

Discussion around smokefree initiatives is often characterised by different sets of opinions or beliefs (Katz, 2005). Many respondents were unreservedly supportive of the proposal. Other respondents were clearly firmly opposed, and many of those opposed were outspoken in their opposition. There was evidence of a polarising effect within the Facebook-linked residents' survey data²⁹, and the business-survey data. For example, a number of respondents to both surveys made reference to reports of cancelled bookings and a reported drop in visitor numbers; both perceived as being directly attributable to the zone. The potential for eliciting polarising effects is a known risk of using online social networks (Heidemann, Klier, & Probst, 2012).

The basic positions of *supportive* and *unsupportive* appeared to originate from differences in individuals' perceptions of risks and benefits and differences in world views (e.g., participants' alignment with individualised versus more collective perspectives). Opposition, in particular, appeared to be grounded in perceptions of constrained individual freedoms, and restricted rights (and by extension, the concern that imposing these restrictions on visitors might impact negatively on tourism).

Risk aversion (e.g., possible risk to profitability and/or tourism) appeared to be a factor in some business owners'³⁰ assessments of the zone. While stakeholders tend to align with the position that is in their own best interest (Harrison, Wicks, Parmar, & Colle, 2010) this assumes that individuals have complete information and are able to compare expected advantages with and without the smokefree policy. This evaluation aimed to address some important information gaps in this regard, in particular the views of tourists. The evaluation found that a large majority of the visitors surveyed supported the Hanmer Springs zone and that this was equally true for domestic and international visitors. A substantial proportion of the visitors surveyed also indicated that they found smokefree zones in New Zealand to be generally attractive and that they would be either more likely or no more or less likely (i.e., neutral) to visit other tourist destinations that have smokefree and vapefree

²⁹ Note: although the survey was hosted confidentially and outside of social media, the recruitment link was posted on a platform (Facebook) that had hosted substantial discussions on the topic previously.
³⁰ Or managers or authorised staff.

zones. Only five percent of visitors surveyed indicated that they would be less likely to visit other tourist destinations that have smokefree and vapefree zones.

Another finding of this evaluation was that the majority of business owners/managers reported that the zone trial had no noticeable impacts on their business. A substantial majority of the business owners/managers surveyed reported that since the implementation of the Smokefree and Vapefree Zone trial, there had been no effect on staff, no change in customer behaviour, and no effect (positive or negative) on the overall business. This suggests that while some respondents perceived that the Smokefree and Vapefree Zone would impact business profitability and tourism generally, most respondents did not report adverse outcomes for their business.

Other feedback relating to implementation

Many respondents provided feedback, critiques, and suggestions relating to the implementation of the zone. Some of the more common critiques were used both by supportive and unsupportive respondents to frame their arguments for and against the zone. For example, some supportive respondents commented that the signs were too small and that they wanted to see more prominent signage to enhance awareness. Conversely, some unsupportive respondents also commented that the signs were small, leading to an ineffective programme, which should therefore be dropped. Most of the critiques related to:

- signage
- branding
- communications, and
- compliance/enforcement.

Signage

A number of supporters of the zone commented that the messaging needs to convey the voluntary nature of the zone and include images/maps that define the area of the zone. Some respondents commented that the signs should display the policy wording to clarify any misconceptions around compliance and enforcement.

Branding

A number of respondents indicated that the zone represented a marketable *point-of-difference* for the village (desirable, family-friendly, outdoor-orientated) but others indicated that the branding and marketing did not fully capitalise on this opportunity. A common misconception reported by both supportive and unsupportive respondents was that the zone applied to the whole village.

Communications

A number of business owners/managers, and some residents (mostly opponents of the zone), complained that there had been insufficient consultation on the zone trial from Council. Some respondents indicated that there had been too little publicity about the zone generally, and that some negative publicity has been inaccurate and damaging (e.g., that the zone applied to the entire village).

Compliance/enforcement

Some respondents commented that the zone was ineffective because it was not enforced (seeming to indicate that they were not aware that the zone was voluntary) and other respondents appreciated that the zone was voluntary but thought it should be compulsory (i.e., an enforceable ban). No respondent made any comment about the existing shape/size/streets or lay-out of the trial zone, other than those respondents who indicated that the zone should apply to all public spaces in the village.

Prevalence of smoking and vaping within the zone

The observational methods used to assess smoking and vaping prevalence in this evaluation were evidence-based, simple and relatively low-cost, and represent a pragmatic balance between resource intensity and the precision of the estimates. The scanning methods were tested and practiced by the observers before conducting the real-time scans in Hanmer Springs, and the observation scan sites and viewing perspectives were further refined to enhance accuracy before the project data were collected. However, there are many variables that have been shown to influence outdoor smoking behaviours in public spaces (and their measurement).³¹

Ideally, an observation protocol should account for such variables as population density, presence of children, temperature, time of day, day of week, season, weather conditions, and the types of activities, entertainment, services, and infrastructure available/in use within the observation areas. In order to maximise the precision of the observation data, larger sample sizes would be needed, over multiple observation periods, across a larger range of high-density sites. The Chi-square statistical test also assumes that each pedestrian was observed once and only once, which may not always have been the case.

Despite the substantial number of adults counted in the observation sessions (> 7,000), the sample represents only a small cross-sectional snapshot of smoking and vaping behaviours within a defined zone of Hanmer Springs. In this evaluation, the observations were limited to five weekend days, in two periods. Smoking behaviours at other times of the day/week/month/year may differ from that observed during busy school holiday periods. Transient shifts in these variables (and perhaps others) are likely to influence moment-by-moment smoking and vaping behaviours.

Ideally, two observers working in parallel would provide the opportunity to assess inter-observer reliability and to refine the observers' accuracy, and two observers could potentially record a wider range of variables in real time. In this study, two different observers worked independently over the different time-points. Although both were trained in a similar manner, and both used the same protocol, it is possible that this introduced some variation between observers, and this is acknowledged as a limitation of the prevalence study. With respect to the characteristics of the observation scan sites (i.e., types of activates, entertainment, services nearby/adjacent), none of the observation sites were directly adjacent to a licensed bar, and it is possible that higher levels of smoking behaviours would have been observed close to these venues. Future data collection could

³¹ For example, it has been reported that the presence of children has an impact on smoking behaviours, with higher smoking behaviours being linked with lower numbers of observed children (Martin et al., 2014; Thomson & Pathmanathan, 2016; Thomson et al., 2013a).

potentially highlight the types of spaces or locations where smoking is more problematic, and guide future interventions in these areas.

While acknowledging these limitations, the observational methods provide useful estimates of smoking prevalence, adding a valuable further dimension to the evaluation data.

Strengths and limitations

The evaluation used a comprehensive mixed-methods design that brought together multiple data streams. This methodology involved the collection, analysis, and integration of quantitative data (both observational and self-reported) and qualitative data during a phased study over six months (a before-and-during evaluation design based on convenience sampling within a defined geographic community). Specific strengths include the sample of nearly 1,000 respondents across multiple feedback mechanisms (online surveys, pen-and-paper surveys, face-to-face interviewing, and direct observation); the use of a standardised core question-bank with additional questions tailored to the different stakeholder groups; and the comprehensive approach to engaging a wide range of stakeholder groups, including residents, non-resident property owners, business owners/managers, and domestic and international visitors. Strengths of the analysis and data presentation include the group-based data presentation format combined with the presentation of high-level summary data via an infographic.

The evaluation also has limitations, for example, the survey and interview data reported represents only a subset of all Hanmer Springs residents, business owners, property owners, and other stakeholders –i.e., those who were aware of and chose to engage in the feedback process – and the results may not be representative of the opinions and experiences of all people who fall into these groups. In all cases, convenience sampling was used and survey participation was not randomised (i.e., recruitment was targeted and included all those respondents who were eligible to participate). ³² This potentially introduces a selection bias to the findings. That is, respondents will vary in their motivation to complete a survey and/or engage in an interview process. There is a possibility that important differences may exist between those who chose to provide feedback and those who did not (Barriball & While, 1999).

The methods used for Survey 4, via the Facebook link, differed substantially from the other surveys. The Facebook-linked survey was advertised in the public domain and was shareable, whereas Surveys 1-4a³³ had been tightly focused on identified groups within the Hanmer Springs village, either by pre-prepared email lists, via face-to-face interviewing, or via pen-and-paper survey cards. The reach of the Facebook group(s) is approximately seven times the size of the resident population in Hanmer Springs (7,000 vs 1,000) indicating that a majority of group members are unlikely to reside in the village. In addition, although the results were filtered by resident/property owner status, this filtering was reliant on respondents selecting the appropriate option in the initial screening/disqualification question. Further, the general characteristics of the sample are not known and therefore the generalisability of the findings to the actual Hanmer Springs resident population is uncertain.

³²The only criteria for participation was whether individuals agreed to participate.

³³ Residents via newsletters.

There may be important differences between those who chose to provide feedback via this channel and those who did not. Analysis of the qualitative data identified a number of respondents expressing strong opposition to the zone (using language and phrasing that was qualitatively different from those comments submitted by the other platforms/methods) and individually-focused views (rather than group-oriented views). Facebook respondents also commonly indicated that they were personally unlikely to change.

Finally, these data may have been influenced by 'priming effects'. Specifically, the Facebook platform had hosted some discussion and repetition of incorrect information prior to the survey link posting, specifically, an instance of misreporting by mainstream media, in which the trial was described as village-wide rather than within-zone.

CONCLUSION

Overall, a clear majority of respondents to the Hanmer Springs Smokefree and Vapefree Zone evaluation surveys supported the zone. Only a relatively small minority opposed the zone. While some business owners indicated apprehension about the zone, most business owner/manager respondents were supportive. Notably, a large majority of responding visitors indicated support for the zone and most indicated that the same rules should apply to both smoking and vaping. While vaping did not feature as a health concern, visitors (in particular) indicated that they find it intrusive, a view also shared by a number of residents. It appears that only a small proportion of visitors to Hanmer Springs smoke or vape (estimated to be approximately 5% or less) and observational data indicated that the zone trial was associated with a reduction in the number of people visibly smoking and vaping within the zone.

This evaluation finds the Hanmer Springs Smokefree and Vapefree Zone to be an evidence-informed policy tool for limiting exposure to cigarette smoke and smoking and vaping behaviours. These types of initiatives already have a strong research base and are supported by appropriate legislation and ethical frameworks. ³⁴ Such policies have been successfully applied to indoor workplaces (Fichtenberg & Glantz, 2002), social housing (Canterbury District Health Board, 2016), civic buildings, parks and playgrounds (Marsh, Robertson, Kimber, & Witt, 2014), outdoor dining (Cancer Society & Canterbury District Health Board, 2017), and other public spaces.

When evaluating any policy it is important to take into account the distribution of the burdens and benefits of the policy; that is, who is affected either positively or negatively. The weight of evidence from this evaluation points towards a net benefit both for individuals and for the community from a Smokefree and Vapefree CBD Zone in Hanmer Springs.

³⁴ The *Human Rights Act* makes it unlawful to discriminate in certain areas – however, smoking is not a ground in the Act.

RECOMMENDATIONS

The following recommendations are based on the analysis of all data collected during this evaluation as well as information derived from the New Zealand and international literature. While the recommendations listed below relate specifically to the Hanmer Springs Smokefree and Vapefree Zone, the recommendations may be used by other local authorities as guidance for outdoor smokefree and vapefree policy design and implementation. Recommendations:

- That the Hurunui District Council permanently implements the Hanmer Springs Smokefree and Vapefree Zone (including refining and strengthening the policy and implementation as outlined in the *Discussion* and below).
- That the Hurunui District Council maintains ongoing monitoring (as necessary) to identify any spaces or locations where smoking/vaping remains problematic and which may require additional strategies to encourage/achieve compliance.
- That brief policy wording is added to the signage to clarify the intent of the policy with respect to compliance and enforcement.
- That the signage is re-designed to increase visibility/impact (e.g., size, colour, and images, map, messaging, and improving placement/coverage), and an additional large sign that reflects these changes (including a zone map) is set up in a prominent location within the zone.
- That the zone branding is revised to indicate/include a reference to the area to which it applies. For example, "smokefree CBD", "smokefree streets", "Fresh air zone", "Central village zone", or similar.
- That the Hurunui District Council review and update other existing smokefree policies to include vapefree (e.g., Smokefree playgrounds).
- That designated smoking areas/shelters (in public spaces, within the zone) are not supported by the Hurunui District Council. This includes leased council-owned footpaths as used for outdoor dining (i.e., apply no-smoking/vaping clauses to new leases/renewal for existing leases).³⁵
- That local authorities give consideration to the level of public consultation and evaluation undertaken as part of future smokefree initiatives. The positive findings of this evaluation (and others) suggest that less intensive public consultation³⁶ and evaluation are likely sufficient to successfully implement smokefree and vapefree CBDs in the future (e.g., observational monitoring, and accessible feedback channels).

³⁵ Designated smoking areas have been shown to strongly limit protection from second-hand smoke in areas where street smoking bans are in place (Yamato et al., 2013) and designated smoking areas typically do not lead to less smoking (Roszkowski, Beth Neubauer, & Zelikovsky, 2014).

³⁶ The Local Government Act 2002 states that only 'significant decisions' need trigger a consultation process. A significant decision is defined as a decision that will have a high impact on a district or region, on individuals who are likely to be affected by the decision, or the decision will affect the ability of a council to perform its role, including the financial costs of doing so. The compliance provision in section 79 of the Act sets out the extent to which councils must comply with decision-making requirements in any particular set of circumstances. Councils are only expected to undertake full consultative and analytical processes for significant decisions.

References

- Atkinson, J., Salmond, C., & Crampton, P. (2014). NZDep2013 Index of Deprivation. Wellington: Department of Public Health, University of Otago
- Barriball, K. L., & While, A. E. (1999). Non-response in survey research: A methodological discussion and development of an explanatory model. *Journal of Advanced Nursing*, *30*(3), 677-686.
- Cancer Society. (2018). Consultation with business owners/managers on their views about introducing a smokefree street zone in Hanmer Springs. Unpublished manuscript. Cancer Society, Canterbury - West Coast division.
- Cancer Society, & Canterbury District Health Board. (2017). *Evaluation of The Fresh Air Project: piloting smokefree outdoor dining areas in Christchurch*. Christchurch: Cancer Society Canterbury-West Coast Division Inc, Community & Public Health (Canterbury DHB).
- Canterbury District Health Board. (2016). *Evaluation of the adoption and implementation of the Christchurch City Council smokefree social housing policy*. Christchurch: Community & Public Health (Canterbury DHB).
- Fichtenberg, C. M., & Glantz, S. A. (2002). Effect of smoke-free workplaces on smoking behaviour: systematic review. *British Medical Journal, 325*(7357), 188. doi: 10.1136/bmj.325.7357.188
- Gendall, P. (2007). Palmerston North City Council smokefree outdoor dining permit condition evaluation 2016-17. Retrieved from: https://www.otago.ac.nz/wellington/otago661624.pdf.
- Green, J., & Thorogood, N. (2014). *Qualitative methods for health research* (3 ed.). London: Sage.
- Hanson, W. E., Creswell, J. W., Clark, V. L. P., Petska, K. S., & Creswell, J. D. (2005). Mixed methods research designs in counseling psychology. *Journal of Counseling Psychology*, *52*(2), 224-235. doi: 10.1037/0022-0167.52.2.224
- Harrison, Wicks, Parmar, & Colle, D. (2010). *Stakeholder Theory, State of the Art*. Cambridge: Cambridge University Press.
- Heidemann, J., Klier, M., & Probst, F. (2012). Online social networks: A survey of a global phenomenon. *Computer Networks*, 56(18), 3866-3878. doi: https://doi.org/10.1016/j.comnet.2012.08.009
- Hess, I., Lachireddy, K., & Capon, A. (2016). A systematic review of the health risks from passive exposure to electronic cigarette vapour. *Public Health Res Pract, 26*(2), e2621617.
- Hoffman, S. J., & Tan, C. (2015). Overview of systematic reviews on the health-related effects of government tobacco control policies. *BMC Public Health*, 15, 744. doi: 10.1186/s12889-015-2041-6
- Hurunui District Council. (2012). Smokefree outdoors strategy. Retrieved from <u>www.hurunui.govt.nz/assets/Documents/Strategies/Smokefree%20Outdoors%20Strategy%</u> 202012.pdf.
- Hurunui District Council. (2016). Hurunui District Council Smokefree Outdoors Strategy. Retrieved from

http://www.hurunui.govt.nz/assets/Documents/Strategies/Smokefree%20Outdoors%20Strategy%202012.pdf.

- Hutt City Council. (2018). *Smokefree Lower Hutt*. Retrieved from <u>http://www.huttcity.govt.nz/Our-City/smokefree-lower-hutt/</u>.
- Invercargill City Council. (2017). Smokefree Areas Policy. Invercargill: Invercargill City Council.
- Katz, J. E. (2005). Individual rights advocacy in tobacco control policies: an assessment and recommendation. *Tobacco Control, 14*(suppl 2), ii31. doi: 10.1136/tc.2004.008060
- Levy, D. T., Hyland, A., Higbee, C., Remer, L., & Compton, C. (2007). The role of public policies in reducing smoking prevalence in California: results from the California tobacco policy simulation model. *Health Policy*, 82(8), 167-185.
- Liamputtong, P. (2013). *Qualitative research methods*. Melbourne: Oxford University Press.

- Marsh, L., Robertson, L. A., Kimber, H., & Witt, M. (2014). Smokefree outdoor areas in New Zealand: how far have we come? *The New Zealand Medical Journal (Online)*, *127*(1389).
- Martin, N., McHugh, H., Murtagh, J., Oliver-Rose, C., Panesar, D., Pengelly, H., . . . Wilson, N. (2014). Observational study of the visibility of branded tobacco packaging and smoking at outdoor bars/cafes in Wellington, New Zealand. *New Zealand Medical Journal, 127*(1404), 27-36.
- Mason, K. (2016). Burden of disease from second-hand smoke exposure in New Zealand. *New Zealand Medical Journal, 129*(1432), 16-25.
- Ministry of Health. (2013). *Health loss in New Zealand: a report from the New Zealand Burden of Diseases, Injuries and Risk Factors Study, 2006–2016* Retrieved from <u>http://www.health.govt.nz/system/files/documents/publications/health-loss-in-new-zealand-final-v2.pdf</u>
- Ministry of Health. (2016). *Electronic Cigarettes: Information for health care workers*. Wellington: Ministry of Health.
- Ministry of Health. (2017). Annual update of key results 2016/17: New Zealand Health Survey. Online interactive web tool. Retrieved from https://minhealthnz.shinyapps.io/nz-health-survey-2015-16-annual-update/
- Ministry of Health. (2018a). *Health and independence report 2017*. Wellington: Ministry of Health.
- Ministry of Health. (2018b). *Vaping products information for stop smoking services*. Wellington: Ministry of Health.
- Platter, H. N., & Pokorny, S. B. (2018). Smoke-free signage in public parks: impacts on smoking behaviour. *Tobacco Control, 27*(4), 470-473. doi: 10.1136/tobaccocontrol-2016-053624
- Pope, C., Ziebland, S., & Mays, N. (2000). Qualitative research in health care. Analysing qualitative data. *BMJ (Clinical research ed.), 320*(7227), 114-116. doi: 10.1136/bmj.320.7227.114
- Public Health Association Australia. (2018). E-cigarettes Policy Position Statement. from https://www.phaa.net.au/documents/item/2949
- Ritchie, J., & Spencer, L. (1993). Qualitative data analysis for applied policy research. In A. Bryman & R. Burgess (Eds.), *Analysing qualitative data* (pp. 173–194). London: Routledge.
- Roszkowski, M., Beth Neubauer, L., & Zelikovsky, N. (2014). Perceived Benefits of a Designated Smoking Area Policy on a College Campus: Views of Smokers and Non-smokers. *New York Journal of Student Affairs: The Journal of the College Student Personnel Association of New York State, 14*, 19-28.
- Rotorua Lake Council. (2016). *5.10 Smokefree Outdoor Spaces Policy*. Rotorua: Rotorua Lakes Council.
- Statistics New Zealand. (2013). Census data tables. Retrieved 11 December 2018, from http://nzdotstat.stats.govt.nz/wbos/Index.aspx#
- Thomson, G., & Pathmanathan, N. (2016). *The point prevalence of smoking in selected sports fields and downtown locations in Wellington: Observations in Novembers 2015.*
- Thomson, G., Russell, M., Jenkin, G., Patel, V., & Wilson, N. (2013a). Informing outdoor smokefree policy: methods for measuring the proportion of people smoking in outdoor public areas. *Health Place, 20*, 19-24. doi: 10.1016/j.healthplace.2012.11.006
- Whanganui District Council. (2017). *Whanganui Smokefree and Vapefree Outdoor Areas Policy*. Whanganui: Whanganui District Council.
- Wilson, N., & Thomson, G. (2016). Survey of smokefree signage at playgrounds: the potential value of comparisons with dog control signage. *Australian and New Zealand journal of public health*, *40*(4), 395-395. doi: 10.1111/1753-6405.12540
- World Health Organization. (2016). *Electronic Nicotine Delivery Systems and Electronic Non-Nicotine Delivery Systems (ENDS/ENNDS)*. Paper presented at the Conference of the Parties to the WHO Framework Convention on Tobacco Control, Delhi, India.
- Yamato, H., Mori, N., Horie, R., Garcon, L., Taniguchi, M., & Armada, F. (2013). Designated Smoking Areas in Streets Where Outdoor Smoking is Banned. *Kobe Journal of Medical Sciences, 59*, E93-E105.

Young, F. W. (1981). Quantitative analysis of qualitative data. *Psychometrika*, 46(4), 357-388. doi: 10.1007/BF02293796

Appendices

Appendix 1: Observation methodology extract

Objective

To assess the influence of the Hanmer Springs Smokefree and Vapefree Zone on observed smoking prevalence, at baseline and during the trial.

Method

The method for this observational study was informed by Thomson et al., (2013a) and Thomson & Pathmanathan, 2016. It has been designed to be simple, low-cost and work with a single observer. The observations are to take place on two separate Saturdays, baseline and one during the trial programme, to help determine the effects of the Hanmer Springs Smokefree and Vapefree Zone. The observations will occur on retail streets and pedestrian areas, in four pre-defined observation sites (public spaces). Beforehand, it will be trialed at one site in Christchurch city centre to train the observer and test the process.

Process

- 1. Four observation sites will be visited in one day
- 2. In one day there will be eight *site visits* (i.e. each observation site will be visited twice, in the AM and PM).
- 3. A *site visit* takes approximately 20-25 minutes to complete: the observer will record supplementary information, before beginning the *observation scans*.
- 4. An *observation scan* takes 4-5 minutes to complete, during this time the observer will record four variables: smokers, vapers, adults, and those aged under 12 (*this process is explained in detail below*). Once an *observation scan* is complete, the observer will conduct two more *observation scans*, consecutively. Therefore they will have approximately, 12-13 minutes of observed data and completed 3 *observation scans* for one site visit before moving on to the next *observation site*.

The observer will be counting four variables during each observation scan. The observer will select an *observation point*, where all of a selected observation site can be seen, and where they can be discreet (e.g., an observation site might be a bench or picnic table with a pre-determined field view).

The definition of the variables are:

Smoker	Someone in possession of a cigarette, cigar or pipe (whether in their mouth or hand). Count smokers rather than cigarettes (e.g., if a person consumed more than one cigarette in the observational period, they are counted as one smoker. If two people shared one cigarette they are counted as two smokers).
Vaper	Someone in possession of e-cigarette or vaping device (whether in their mouth or hand).
Adult/adolescent /denominator	All of those who look to be aged over 12 years
Pre-adolescent children	Someone who subjectively looks to be 12 years or under

Conducting an observation scan

Prior to conducting a scan, the observer will have chosen an *observation point* where they are able to see the full observation site. The observer will have download the TapCounter App on a mobile device and also have a stopwatch/alarm.

People are counted/observed as they **enter the observation site** (or already in the observation site). Within a four to five minute observation scan the observer will count:

- 1. All people smoking or vaping, in the first and third, five minute period
- All people (regardless of whether they are a non-smoker/smoker/vaper), and those who appeared to be 12 years and younger in the second and fourth, five minute periods
 The ratio of data from the first and third scans to the second and fourth scans are used to gain an approximate proportion of people smoking or vaping.

This five minute scan process is repeated three times consecutively in one observation site, before moving on to the next site. The observer will need to fill in the supplementary information and scan observations table at each site visit (*see below*).

Contextual variables

These variables are to be taken note throughout the entire visit in Hanmer Springs, as they provide contextual information for the evaluation.

- Weather conditions (e.g., any rain, wind and approx. temperature)
- Observe how busy the carpark is, adjacent to Hanmer Pools (i.e., are there free carparks or are all taken, or overcapacity cars circulating to find a park). This is an estimate of how busy Hanmer is on a given day/time.
- How many smokers and vapers are observed throughout the entire day visit to Hanmer? This will be a tally of all people observed smoking or vaping throughout entire visit, whether the observer is walking from one location to another, or eating their lunch. Can be recorded in a notebook or on a mobile phone.

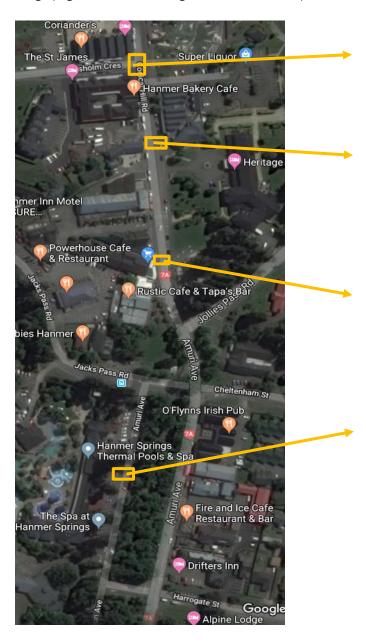
Walking route

After completing the morning site visits, the observer will complete a walking loop of the Smokefree and Vapefree Zone (modified to capture the busiest parts) and note the following:

- All visible smokers and vapers while walking in the route (how many and location)
- Clear evidence of smoking (photographs of butt litter or cigarette packets if possible)
- Smokefree signage (amount and photograph some)

Example of selecting locations

Observation sites: four footpaths or sitting areas to be chosen based on high pedestrian flow. Areas need to be well defined and no larger than necessary. Observational sites on footpaths should not be larger than approximately 5m x 2m. All observation sites are public spaces and should not include any private premise or land. People are counted as they enter the observation site. Observational points will need to have an unobstructed view of the entire observation site. Observation sites exclude: leased areas on footpaths for private outdoor dining, and other private outdoor dining settings (e.g., Monteiths dining area on Amuri Ave).



<u>Site 4</u>: Both Corners of the T-intersection between Chisholm Avenue and Conical Hill Road (opposite the Mini Golf Course).

<u>Site 3</u>: Footpath on both sides of road mid-way up the Conical Hill Road: outside Hanmer Springs Adventure Centre (on West side) and corresponding entrance to Shopping Alley (on the east side of the road).

<u>Site 2</u>: Footpath outside Four Square Supermarket (from top of ramp to corner of building). Both sides of the road.

<u>Site 1</u>: Footpath and pedestrian crossing outside Hanmer Springs Thermal Pools & Spa near smokers' bench. Both sides of the road

References

Thomson, G., & Pathmanathan, N. (2016). *The point prevalence of smoking in selected sports fields and downtown locations in Wellington: Observations in Novembers 2015.*

Thomson, G., Russell, M., Jenkin, G., Patel, V., & Wilson, N. (2013). Informing outdoor Smokefree policy: methods for measuring the proportion of people smoking in outdoor public areas. *Health & Place, 20*, 19-24.

Appendix 2: Public face-to-face survey

	Resident
	Visitor from NZ
	Visitor from overseas
	Other (please specify)
)2: Ai	re you aware of the Smokefree and Vapefree zone in Hanmer Springs?
)2: Aı	
)2: Aı	re you aware of the Smokefree and Vapefree zone in Hanmer Springs?
	re you aware of the Smokefree and Vapefree zone in Hanmer Springs? Yes
	re you aware of the Smokefree and Vapefree zone in Hanmer Springs? Yes No

Zone should be Smokefree *and* Vapefree (or neither).

- □ I support the zone being both smokefree and vapefree (Note: if necessary, reiterate that this is only within Zone, i.e., as it is currently during this trial)
- $\hfill\square$ I support smokefree but vaping should be allowed in the Zone
- $\hfill\square$ Both smoking and vaping should be allowed in the zone.

Comments_____ (if any)

Q4: Should the Smokefree and Vapefree Zone in Hanmer Springs become permanent?

- □ Yes
- □ No
- Comment (*why/why not/other*)_____

Q5: Do you smoke?Yes/NoQ6: Do you vape?Yes/No

Appendix 3: Have your say cards

Have your say					
New Zealand has a goal to be smokefree by 2025. As part of a local effort to support this goal, Hanmer Springs has a no smoking and no vaping zone in place around the main street and some other public spaces within the village.					
Please help us by providing some feedback					
 Were you aware that Hanmer Springs has a no smoking/no vaping zone? Yes No 					
What do you think about the no smoking/no vaping zone in Hanmer Springs?					
 I support both no smoking and no vaping I support no smoking but vaping should be allowed Both smoking and/or vaping should be allowed Comments 					
New Zealand is working towards making many more key public spaces and tourist spots no smoking /no vaping zones. Would you be more or less likely to visit other places in New Zealand that have no smoking/no vaping zones?					
 Less likely to visit No difference More likely to visit Additional comments welcome 					
 Are you An international visitor A domestic visitor 					
Do you smoke? Yes/No and/or					
Do you vape? Yes/No					
Thank you for taking the time to complete this questionnaire					

Appendix 4: Business survey

Name of business____

Type of business _____

Q1: What is your role here?

- □ 0wner
- □ Manager
- □ Owner/manager
- □ Staff member

Q2: What do you think about the Smokefree and Vapefree Zone in Hanmer Springs?

<u>Probe</u> - how does that compare with what you were expecting?

2b: The next part is asking your opinion on the Zone, specifically, whether you think that the Zone should be Smokefree *and* Vapefree (or neither). We are especially interested to know which of these responses best fits your view.

- □ I support the zone being both smokefree and vapefree (Note: if necessary, reiterate that this is only within Zone, i.e., as it is currently during this trial)
- □ I support smokefree but vaping should be allowed in the Zone
- □ Both smoking and vaping should be allowed in the Zone

Q3: What feedback have you received from customers about the Smokefree and Vapefree Zone? *Prompt for negative and positive feedback if need be*

 Q4: We're also interested if the Smokefree and Vapefree Zone has mean your (this) specific business, or for staff? This questions has three parts way through it. (a) Prompt 1 Has the trial of the Smokefree and Vapefree zone influenced how you converse we've listed some obvious choices but you'll also have a chance to tell to be a state of the second s	s to it, so we'll work our onduct your business?
thought of.	
Has the trail encouraged you (the business/business owners) to:	
 go fully smokefree extend outdoor seating 	$\Box YES \Box NO \Box N/A$ $\Box YES \Box NO \Box N/A$
o extend outdoor seating	\Box IES \Box NO \Box N/A
 extend designated smoking areas to further accommodate guests do anything else differently (Note: <i>prompt</i> for this and if yes specify 	-
N/A	
 received (or had to deal with) any comments or complaints, or challeng Yes No 	ges from customers?
<i>If yes,</i> what were some of the effects?	
 (c) Prompt 3 – Are there any staff who smoke or vape? Yes No If yes, has the zone changed where or when they smoke (or anything else 	se)?

Q5: If you consider your own (this) specific business now – what difference do you think the Smokefree and Vapefree Zone has had on your customer numbers and/or behaviours? (if any)

(a) **Prompt** – "So, part 'a' – any influence on customer numbers"?

- □ Yes
- □ No

And note any evidence or strength of evidence, i.e., are written records produced, or is it a 'guestimate' and/or are other explanations discussed?.... but don't necessarily ask for these Comment

(b) *Prompt* – any effect on customer behaviours? [e.g., stay longer/shorter, indoors/outdoors, spend more/less].

- □ Yes
- □ No

Comment (again, note any evidence provided, if any)

Note: Flag that the final part of this question is multi-choice. And again, be clear that these questions are about this business, not business or numbers in Hanmer village or the zone generally.

(c) So *OVERALL* (considering your customer numbers and behaviours together), how would you describe any difference (effects/changes to the business) since the start of the Trial?

- □ No change
- □ Positive effect
- □ Negative effect

Last phase – thanks for answering those questions, your information is very helpful...There are just two more questions left that we would appreciate your perspective on.

Q6: Since the trial has started, have you noticed any difference in the number of people smoking and/or vaping in the street outside this business (i.e., from what you can see from here) ... or anything else about where and when people smoke?

Q7: In this final question, we are interested to gauge the level of support for the Zone to becoming permanent ... so for our evaluation, we are asking this from a *business* perspective in this case.... so ... should the Smokefree and Vapefree Zone in Hanmer Springs become permanent?

- □ Yes
- □ No
- Comment (*why/why not/other*)_____

Do you have any last comments?

Appendix 5: Resident survey (Online)

Q 1: Which option below applies to you?

- □ I am a resident of Hanmer Springs
- □ I am a non-resident property owner/Hanmer Springs rate payer (e.g., batch or rental property owner)
- □ Other (*please specify*) _____

Q2: Are you aware of the Smokefree and Vapefree zone in Hanmer Springs?

- □ Yes
- \square No
- □ If yes, how did you become aware of the zone?_____

Q3: The next question is asking your opinion on the Zone, that is, whether you think that the Zone should be Smokefree *and* Vapefree (or neither).

- □ I support the zone being both Smokefree and Vapefree
- □ I support smokefree but vaping should be allowed in the Zone
- □ Both smoking and vaping should be allowed in the zone.

Comments_____ (if any)

Q4: Should the Smokefree and Vapefree Zone in Hanmer Springs become permanent? (i.e., if it was up to you to decide)

- □ Yes
- □ No
- Comment (*why/why not/other*)_____

Q5: How would you describe any difference in the number of people you might see smoking or vaping in the Zone, on a typical day in Hanmer Springs, since the start of the trial (Valentine's Day 2019)?

- □ The number of smokers/vapers has decreased
- □ No changes
- □ The numbers of smokers/vapers has increased
- □ I'm not sure

Q6: Do you smoke?Yes/NoQ7: Do you vape?Yes/No

Q8: Do you have any last comments?

Appendix 6: Signage Photos

Rubbish Bin Signs





Picnic furniture





Posters

