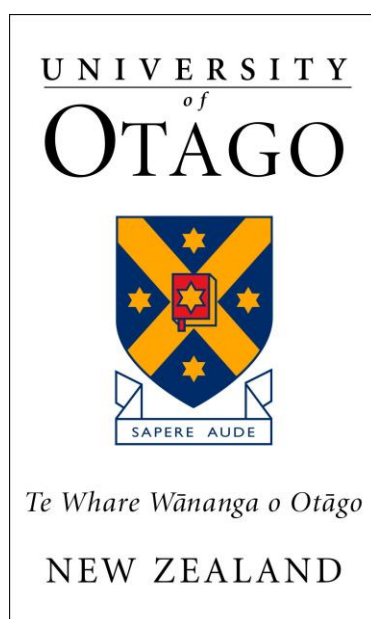


**Public attitudes to new smokefree outdoor places
policies: An analysis of 217 New Zealand online
comments**



Jane Oliver, George Thomson, Nick Wilson

Department of Public Health, University of Otago, Wellington

March 2014

Email: george.thomson@otago.ac.nz

ABSTRACT

Introduction and Aim

There is limited evidence in the qualitative literature about smoking in and smokefree outdoor areas. We aimed to identify what themes could be found in online discussions provoked by news articles on smokefree outdoor public areas.

Design and Methods

We analysed online comments responding to 10 news articles in New Zealand media during June 2012 to January 2013, about proposed smokefree outdoor area policies. Major themes and sub-themes were identified. Some quantitative analyses were also performed.

Results

We identified 375 online comments responding to the articles, of which 217 were topic relevant. The major themes found included: concerns about the effects of smoking and secondhand smoke (SHS); doubts about evidence of SHS harm; rights to smoke or to breathe smokefree air; the treatment of smokers by society; and whether proposed policies were appropriate. Of the relevant comments, 41% appeared to support outdoor smokefree area policies and 48% were opposed.

Discussion and Conclusions

Amongst these motivated commenters, support for smokefree outdoor area policies was less than in New Zealand public opinion surveys. Online comments provide a simple and rapid means of identifying key themes that may inform policy-making around new smokefree area policies. As a data source, online commentary in response to news articles appears to have value for a range of public health research activities where public opinion is an important component.

Introduction

There is a growing international interest in making outdoor areas smokefree,[1-5] with a number of arguments for these policies. These include denormalising smoking, reducing secondhand smoke (SHS), and reducing litter and environmental harm.[6-10] Smoking in outdoor areas can significantly increase SHS levels.[11-13] SHS is a known carcinogen with no known safe exposure level.[14] Designating smokefree areas may improve the public image of urban areas, and may be of interest to authorities interested in 'healthy' city branding.[1] SHS is a respiratory irritant and many people consider it a nuisance. This nuisance effect for large numbers of pedestrians, combined with other concerns, may affect public opinion considerably.

In English-speaking Western countries, support for designating particular outdoor public places smokefree appears to be increasing over time, especially in areas with children.[15] In jurisdictions where policies are changing perceptions of the normality of smoking, tolerance of smoking outdoors is decreasing. For instance, in Queensland in 2011, 76% of the public agreed to the statement: 'Because of Queensland's tobacco laws, I find it irritating when someone smokes near me in a public place'.[16]

In New Zealand, a 2012 national survey found 73% agreed with the statement 'smoking should be banned in all outdoor public places where children are likely to go'.[17] In a 2008 New Zealand survey, when asked, 'do you think people should be able to smoke anywhere they want, only in set areas, or not at all in town or city squares?', 78% of responders felt

people should either smoke only in restricted sections or not smoke at all,[18] and 82% agreed with the statement ‘smoking should not be allowed within five metres of the entrance of all buildings used by the public, like shops, office buildings and libraries’.[19]

There is very limited evidence in the qualitative literature about the reasons the public think smoking should or should not be allowed in outdoor areas. The use of focus groups to study student reactions to campus smokefree outdoor policies found reduced smoking, less litter, and concerns with the ‘burden’ on smokers and with enforcement.[20] Interviews with Vancouver smokers and ex-smokers found that they considered outdoor restrictions ‘overly restrictive’.[21] One study in Toronto used interviews with smokers and non-smokers about smoking at city building entrances. It found some smokers were more comfortable smoking away from non-smokers. Non-smokers reported discomfort, nuisance, health concerns and repugnance about butt litter.[22]

In some media websites, readers can leave online comments alongside electronic news articles, and this has increased the ability of the public to comment on news articles.[23] While there have been content analysis studies of other types of tobacco-related online content, such as photographs on website pages that mentioned smoking,[24] videos,[25, 26] advertisements,[27] and online news stories about waterpipe smoking,[28] there appear to be few published analyses of online *comments* provoked by tobacco-related news items.

This resource appears to be under-utilised when seeking to ascertain the public’s views on particular health topics. One study analysed content on an online home building forum that related to smoking, SHS and smoking restrictions on construction sites. It found conflicting views from smokers and non-smokers, as well as discourses around quitting, rights and evidence.[29] A study of tobacco-related Twitter posts found more positive than negative attitudes to tobacco, although waterpipe and e-cigarette related posts were more positive than those relating to traditional tobacco.[30] Another study examined 394 comments from two articles reporting on cash incentives for healthy behaviour, and found these to be a rich source of material that would otherwise be difficult to access.[31]

Because of the growing interest in smokefree outdoor policies internationally, and the restricted qualitative evidence about attitudes to them, we investigated whether online material could be used to explore attitudes to smoking in, and smokefree policies for, outdoor areas. In particular, we aimed to identify what themes could be found in online discussions provoked by news articles on smokefree outdoor public areas. We also aimed to explore the potential utility of this data source for public health research more generally.

Methods

Data sources

Using the Factiva media database we searched for online public responses to New Zealand newspaper stories, from 1 June 2012 to 31 January 2013, that described possible smokefree outdoor policies. Using the search words ‘smoking’, ‘outdoor’ and ‘policy’ we found 10 such articles with accompanying online discussions, with a total of 375 online comments. Four of the articles were from July 2012 and stemmed from a study on air pollution on city footpaths resulting from smoking.[12] Of the 10 articles, four were from the *Dominion Post* (comments: n=144, 73, 39 and 26),[32-35] with others from the *Taranaki Daily News* (n=26),[36] the *Southland Times* (n=21),[37] the *Otago Daily Times* (n=17),[38] the *Manawatu Standard* (n=16),[39] the *Bay of Plenty Times* (n=11) [40] and *Hawkes Bay Today* (N=2).[41]

Sorting the data

Two of the researchers (NW, GT) conducted preliminary readings and codings of the comments, and some initial themes were isolated. Another one of the researchers (JO) then read all the online comments and classified them in terms of relevance for smokefree outdoor public areas. Comments were excluded from analysis if they: (a) only concerned a total ban on tobacco smoking in New Zealand (not just outdoors), (b) focused only on critiquing/heckling other commenters (rather than on the substantive issue) or (c) only concerned another issue, for example air pollution from traffic.

Thematic analysis

After re-reading and coding the remaining relevant comments, the lead researcher (JO) constructed an initial list of all themes and sub-themes which the comments addressed. Individual comments were identified using unique identifiers, automatically provided by the host website. Additional identifiers indicating the article source and date were added to the unique identifier for each quote. The coding and themes were matched against those previously done, and discussions with all authors were used to align the coding and agree on themes.

Prominent themes and sub-themes were then listed. Following discussion involving all of the researchers, four major theme groups were selected. A theme tree was created, incorporating each theme group as a major heading, with themes and sub-themes displayed under each group heading.

Tables were constructed for each major theme group which listed unique identifiers of all relevant comments for the themes and sub-themes. In cases when a comment was considered relevant to more than one major theme group, the relevant parts of the comment were copied to all relevant tables. All authors discussed the material and selection for the tables.

Statistical analysis

Various aspects of authorship were quantified. The number of relevant comments was expressed as a proportion of the total 375 comments. The mean word count and range of comments were calculated. For the relevant comments, the author's support or opposition to the proposed smokefree policies, or whether they appeared to be neutral or unclear on their position, was determined. The proportion of comments opposing and supporting the proposed smokefree policies was then calculated.

Ethical approval was obtained through the Department of Public Health, University of Otago (Category B ethics approval process).

Results

Data sources

Of the ten selected articles, nine mentioned the possibility of smokefree outdoor policies being implemented in the region that the article was published in, or discussed a local council's response to new research findings on the toxicity of SHS. One article discussed the New Zealand Government's national stance on cigarette smoking, but it resulted in many comments on smokefree outdoor policies.[35] All 375 comments were relatively concise (mean: 79 words, range: 1 – 247 words). Consequently the thematic analysis was relatively feasible to perform.

There appeared to be 317 different authors for the 375 comments. The majority (279 authors, 88%) left only one comment, with 28 authors (9%) commenting on the same article twice, and 10 (3%) commenting more than twice. The maximum number of times an author commented was nine times.

There were 217 relevant comments (58% of the total 375 comments). Of the 317 authors, 185 (58%) were considered to have made at least one relevant comment. Of the authors who posted relevant comments, 41% appeared to support outdoor smokefree area policies, 48% opposed and 11% were either unclear in their sentiments or appeared neutral.

Thematic analysis

Four major theme groups emerged, with many associated themes and sub-themes (Tables 1-4) and a wide diversity of views. Many comments ranged across several themes. The four themes were found in the responses to all the articles except the one where there were only two comments.

The first theme group consisted of concerns about smoking in public (Table 1). These largely centered on health issues and repugnance about almost all aspects of cigarette smoking. Some comments suggest substantive concerns (such as acute asthma triggered by SHS and a strong desire to protect children from it). There were frequent concerns about the pollution created by smoking. A less common theme was the effect that proposed smokefree policies may have on societal norms and how this may translate to reducing smoking uptake. Reference was made to visible smoking as a risk factor for ex-smokers relapsing, and the New Zealand Government goal of a 2025 smokefree nation[42] was also raised.

Table 1: Theme 1 - health, nuisance and the environment concerns about smoking and SHS

Sub-themes	Selected quotes	Commenter
Health concerns	“Enjoy your cancer. Try not to give it to anyone else.”	Greg #20, 01:25 pm, Jul 09 2012 [32]
Effect on children	“...your children/child could be effected [by SHS]...”	Ben #10, 10:57 am, Jul 11 2012 [37]
SHS	“Sick of getting facefull of smoke...”	Suomynona #2, 11:25 am, Jun 11 2012 [33]
Litter	“I’m sick of... butts over the streets...”	Dave #20, 09:19 pm, Jun 07 2012 [34]
Pollution	“smokers ...considering the world is yours to pollute... and that fo[o]tpaths are there only to discard to discard your scraggy dog-ends on...”	Dandy #3, 09:26 am, Jul 11 2012 [37]
Repugnance	“I despise smoking and can not tolerate the smell...”	non smoker #37, 11:01 am, Jul 23 2012 [56]
Denormalization	“...smoking used to be a cool thing... Banning smoking in public does give the opposite message.”	D #8, 11:26 am, Jul 10 2012 (Fairfax NZ News, 2012)
Quitting & relapse	“Anything that helps me to give up this habit is gratefully accepted.”	Smoker #38, 12:48 pm, Jun 12 2012 [33]
Asthma	“Ask an asthmatic how they feel about second-hand smoke - it harms us.”	Pam #73, 10:32 am,[o Jul 14 2012 [32]

The second major theme group involved responses to the scientific evidence that smoking and SHS harms human health (Table 2). Many debated the harms attributed to smoking. Some commenters went to non-trivial effort to back up their arguments using logic or anecdotal evidence, or referred to internet publications. Myths were commonly articulated; in particular that exposure to SHS is harmless and easily avoidable. Outright denial of the scientific evidence around SHS occasionally surfaced. Other commenters put significant effort into defending the evidence that smoking and SHS harms health, and into debunking myths relating to the hazard.

The associated sub-theme of the motives and value of smokefree proponents included highly disparaging comments. Proponents were described as irritating ‘do-gooders’ or ‘zealots’, and as ‘bullies’ picking on a ‘weak’ target (smokers) and this idea also emerged in comments in Theme 3. The term ‘zealot’ was noted in nine relevant comments, spread across responses to four articles. Some commenters thought scientists were collaborating with politicians and altered their research findings to advance such policies.

Table 2: Theme 2 – doubting and discrediting the scientific evidence that smoking and SHS harms health

Sub-themes	Quotes	Commenter
Distrust of Government	“...govt...feeding us lies ...to justify mass increases in tax on cigarettes!!”	Media Propaganda #52, 10:54 pm, Jul 09 2012 [32]
Science denial	“...the science on 2nd hand smoke is fraudulent.”	paulie #17, 12:53 pm, Jul 09 2012 [32]
Science denial	“This rubbish about 2nd hand smoke... we grew up in... a house full of smokers... Our health is perfectly ok.”	chris #29, 02:03 pm, Jul 09 2012 [32]
Distrust of research	“These tests are fake...”	Richard Lyes #14, 07:19 pm, Jul 10 2012 (Fairfax NZ News, 2012)
Distrust of research	“How much does it cost the tax payer to fund these idiotic "studies"?”	Blondbird #15, 07:44 pm, Jul 10 2012 (Fairfax NZ News, 2012)
Anti-smokefree	“...puritanical zealots! ...ban anything that is going to possibly bother anyone...”	Hypocritic Oaf #11, 01:11 pm, Jun 11 2012 [33]

The third theme group highlighted perceived rights in society and associated justice or equity issues (Table 3). Commenters discussed what rights they felt people have, and ought to have. Many felt ‘people have the right to smoke in public if they choose’. Conversely many others felt ‘everyone has the right to clean air’. The idea that smokers were unfairly treated and portrayed was quite commonly held. Some commenters deplored a ‘nanny state’ seeking to protect its citizens through policies they perceived as being interfering. The nature of the choice to smoke and tobacco addiction were sometimes discussed (Table 3).

Table 3: Theme 3 – “rights” (to smoke or to breathe smokefree air)

Sub-themes	Quotes	Commenter
Rights	“It is my right to breath fresh air.”	AaronW #25, 05:02 pm, Jul 11 2012 (Fairfax NZ News, 2012)
Rights	“It is my right to smoke [publically]...”	Smoker #22, 10:53 am, Jul 11 2012 (Fairfax NZ News, 2012)
Unfair treatment of smokers	“...I am soooo over people demonizing smokers.”	Big H #35, 10:25 am, Jun 12 2012 [33]
Rights to choose	“Personal choice, everyone knows the risks of smoking (and eating fast food) and if they don't it is called evolution!!!”	Steve #1, 01:01 pm, Aug 09 2012 [39]

Lack of rights - Addiction	“I for one would be relieved to be forced NOT to smoke...”	me #32, 10:06 am, Jun 12 2012 [33]
Unfair treatment of smokers	“Smoker-bashing might be awfully trendy - all bullies love a helpless target...”	-suppressed- ^a #26, 01:53 pm, Jul 09 2012 [32]

^a Suppressed by website, no reason provided.

The fourth theme group concerned the appropriateness of proposed smokefree policies – whether making public places smokefree was an appropriate response to the issue of public smoking (Table 4). Opinions ranged from viewing these measures as overly restrictive, to just right, and to not restrictive enough. The practicality of implementing the policies was a strong theme, and some commenters made suggestions on how to go about implementation. Public opinion was sometimes an issue, including how people might react to the implementation of such policies.

Table 4: Appropriateness of proposed smokefree outdoor policies

Sub-themes	Quotes	Commenter
Proportionality	“... regs for smokers are getting a bit over the top.”	Max #6, 11:35 am, Jul 09 2012 [32]
Economic benefits	“Smoking costs our country...”	NZ girl #1, [40]
Comparative importance	“... people who smoke drugs in public are worse...”	southlander #14, 02:34 pm, Jul 11 2012 [37]
Implementation	“No point banning something when you cant afford to enforce the ban.”	colecash #8, 05:09 pm, Aug 09 2012 [39]
Overseas policies	“...in Melbourne they have smoking bans on footpaths nice clean streets.”	Aaron #5, 09:46 am, Jul 11 2012 [37]
Incredulousness	“Let's stop wasting time and ban everything - life is just to risky for us poor humans. Ban humans!”	Angus #2, 11:06 am, Jul 09 2012 [32]
Individual responsibility	“YOUR job to worry about YOUR health - not the council”	Graham_Clarke #5, [40]
Consequences	“If I can only smoke at home I will just turn to marijuana.”	C #18, 09:54 pm, Jul 10 2012 (Fairfax NZ News, 2012)
Economic concerns	“...be prepared to pay big bucks for smokefree NZ...”	Paulie #60, 01:11 pm, Jul 10 2012 [32]

The perceived economic benefits and concerns relating to making public places smokefree were frequently mentioned. Several said that taxes on cigarettes provide the Government with substantial revenue, with an implication that smokefree policies might reduce that revenue. From smokefree proponents, perceived economic benefits of outdoor smokefree policies included reducing costs to the healthcare system, and gains in retail sales (due to the assumption that people would not feel the need to avoid SHS in the street and so be more inclined to spend time in shopping streets). Benefits in reducing street cleaning costs and enhancing New Zealand’s ‘clean and green’ image were occasionally discussed. In general, commenters tended to state that such policies were more likely to put tourists off travelling to New Zealand than to attract them.

Smokefree policies in other parts of the country and overseas were frequently referred to. In some comments there appeared to be support for making New Zealand approaches nationally consistent and consistent with successful policies in other developed countries. Many different solutions were proposed as alternatives to smokefree policies for outdoor public places. Some commenters felt that the ability to buy tobacco should be made harder,

particularly for younger generations. Others felt that tobacco should not be sold at all. Some commenters thought people should simply become more tolerant of public smoking and SHS.

Whether made intentionally or unintentionally, some comments about smokefree outdoor policies were largely off-topic. Very frequently such comments led into debating such tangential issues as whether measures to reduce air pollution from traffic, alcohol abuse and obesity were needed.

In addition to the themes, some observations could be made from the material. Beyond the material in Themes 2 and 3, there was considerable antagonism shown by commentators. Around half the commenters appeared to have negative attitudes towards smokers. There was a strong perception that smoking was a 'smelly, dirty habit' which reflected on smokers themselves and made them repugnant. The idea that smokers are 'stupid' because they regularly engage in harmful behaviour was also sometimes apparent, as was the idea that 'smokers are selfish', presumably because of the view that they annoy and harm others (and perhaps also because they harm themselves). Addiction was sometimes referred to with apparent scorn. A strong counter response to these attitudes was sometimes articulated, with many commenters stating that smokers are 'demonised' and 'discriminated against'. The perception that smokers are 'bullied' because they present 'a weak target' surfaced fairly frequently.

Discussion

This analysis enabled some of the types of online comments about smokefree open areas to be explored. Online comments appear to be a useful way to identify major themes relating to public knowledge and attitudes, in this case on smokefree outdoor area policies. Ideally, such comments would be used in combination with other data sources such as content analysis of media, and in-depth interviews or focus groups with key informants and the public. Quantitative studies (e.g., surveys) should also be considered in order to comprehensively understand the key drivers and barriers to new outdoor smokefree policies. However, as a qualitative data source, online comments have multiple advantages, including easy access, large volumes, and relative lack of inhibitions compared to other sources of opinions.

The policy implications of the evidence includes that while public surveys indicate strong support for smokefree outdoor area policies, amongst those who are motivated to put effort into communicating their views in a public forum, in this case slightly more were opposed to such policies than were supportive. Thus the politics around such policies may be influenced away from the direction of majority opinion by the visibility and prominence of opposing views.

The themes give some idea of the likely range of concerns, supporting motivations, and discourses when smokefree outdoor policies are proposed, and allow advocates and policymakers to plan for or take advantage of the responses. The four main themes found (concerns about smoking in public, responses to the evidence of harm from smoking and SHS, rights in relation to smoking and SHS, and the appropriateness of proposed smokefree policies) have emerged widely in debates about smokefree place policies.[21, 43, 44] The results also indicate that advocates and policymakers in New Zealand and elsewhere may need to be aware of the very strong 'rights' discourse around smokefree outdoor places policies.[45, 46]

This study supports the view (at least for New Zealand) that advocates and policymakers need to be aware of some ignorance of tobacco smoke pollution risks.[47, 48] While smoking was widely recognised as endangering smokers' health and lives, a considerable number of commenters debated this. This suggests for New Zealand that despite health information via the media, school-based education, various health sector media campaigns, and health warnings on tobacco packaging, there is still significant denial or scepticism. For smokers in developed countries there is evidence that this is not unusual.[49, 50]

The myth that SHS is harmless, especially in small quantities, held traction for some, as did the idea that it is easily avoidable. This is despite overwhelming evidence that it harms human health. Over 25 years ago the US Surgeon General reported that SHS caused disease,[51] and in 2006 reported that there is no safe level.[52] The continued strength of this myth in New Zealand suggests either that misinformation sponsored by the tobacco industry may have been moderately successful in perverting some public opinion,[53, 54] and/or that some people are still poorly informed about or in denial of smoking-related risks. New Zealand based information provision efforts may not have been sufficiently effective.[55]

Strengths and weaknesses

There were a number of advantages in analysing online comments to meet our study aims. The primary advantage was that such comments are freely available in substantial quantities. As commenting on online articles is generally an anonymous process, people appeared to be able to openly express their views and arguments without shyness or fear of consequences. Leaving an online comment may be a fairly straightforward process for most computer-literate people, due to the small number of steps involved. Consequently, aside from requiring computer access, basic computer literacy and having sufficient interest and motivation, commenting on an online article is a fairly accessible process (at least to people living in a mostly literate, developed country). For these reasons, the online comments we studied were likely to cover many of the key themes and sub-themes around the issue. Furthermore, comments were usually concise, and therefore quick and easy to analyse. Fairly large numbers of online comments on a topic can accrue quickly, providing an abundant, freely available resource. A sufficient proportion of the comments we looked at were relevant to our aims, and identifying these was simple and rapid.

The aim of qualitative research is to explore the breath, depth, meaning and quality of attitudes and ideas, and the context for them, rather than to quantify such aspects. In this case, online comments should not be seen as being particularly representative. In contrast to the New Zealand 2008 and 2012 survey data with 73%, 78% and 82% of the public supporting smokefree areas 'where children are likely to go', 'in town and city squares' and five metres from public building entrances,[17-19] in our sample only 41% appeared to support smokefree outdoor area policies.

A possible limitation to such analyses is that some online commenters may live in separate jurisdictions (e.g., in this study, outside of New Zealand). However, as the articles were on New Zealand-based newspaper websites and had a major focus on national/local policy, it seems likely that the majority of commenters would have resided in this country. Indeed, only six of the 375 comments were made between 0100—0700 hours (New Zealand time).

Another possible limitation is that such fora may be manipulated by commercial and/or political interests. These could flood a website with comments, and attempt to move or

reframe the debate to their advantage. Some of these potential problems may be ameliorated by ensuring a qualitative study has comments from a wide range of sources (e.g., a number of websites with comments) and a large number of comments. Most comments had fairly unique commenter names (e.g., 'Paulie,' 'Augusta,' and 'What a blardy joke'. It is possible that a single anonymous author may leave multiple comments under different commenter names, but there was no obvious evidence for this (i.e., in terms of replicated text).

A potential weakness with such online data sources is that little or no demographic data are available about the commenters. Some idea of gender can be deduced from names (when given) and smoking status (when alluded to) but age, socioeconomic status and place of residence is unknown.

A final limitation of such analyses is that comments must be taken at face value. This is in contrast to some other documentary data, where more context is available, or to interview data, from which further clarification may be requested in order to obtain the participant's meaning more precisely.

Conclusions

This analysis of online public commentary indicated diverse (and often strong) public views on the issue of making outdoor areas smokefree. This data source appears to have potential value for a range of health sector research where understanding the range and strength of public opinion are important components. In this particular instance, the analysis identified a range of themes and sub-themes that could inform how researchers and policy-makers consider issues around new smokefree outdoor areas.

Acknowledgements: Funding was received from the New Zealand Asthma Foundation (but that organisation played no role in the content of this study or the decision to publish).

References

1. Ueda H, Armada F, Kashiwabara M, *et al.* Street smoking bans in Japan: A hope for smoke-free cities? *Health Policy* 2011;102:49-55.
2. Kennedy R. Evaluation of the City of Woodstock's Outdoor Smoking By-law: A Longitudinal Study of Smokers and Non-Smokers. University of Waterloo. PhD Thesis. August 2010. Accessed November 5, 2013. http://uwspace.uwaterloo.ca/bitstream/10012/5397/3/RDK_final_GSO_2ndrevision.pdf.
3. Department of Health and Human Services (Tas). Smoke-free tour of Tasmania. Tasmanian Government. Hobart. 2012. Accessed July 17, 2013. http://www.dhhs.tas.gov.au/peh/tobacco_control/smoke-free.
4. American Nonsmokers' Rights Foundation. Smokefree Lists, Maps, and Data: Outdoor Area Lists. American Nonsmokers' Rights Foundation. Berkeley. January 2, 2013. Accessed January 16, 2013. <http://www.no-smoke.org/goingsmokefree.php?id=519#outdoor>.
5. Non-Smokers' Rights Association (Canada). Non-Smokers' Rights Association. Compendium of 100% Smoke-free Municipal Bylaws. Non-Smokers' Rights Association (Canada). Toronto. June 2012. Accessed February 19, 2013. <http://www.nsra-adnf.ca/cms/page1421.cfm>.

6. Klein EG, Bernat DH, Forster JL. Young adult perceptions of smoking in outdoor park areas. *Health Place* 2012;18:1042-5.
7. Rayens MK, Hahn EJ, Langley RE, *et al.* Public opinion and smoke-free laws. *Policy Polit Nurs Pract* 2007;8:262-70.
8. Thomson G, Wilson N, Edwards R, *et al.* Should smoking in outside public spaces be banned? Yes. *BMJ* 2008;337:a2806:.
9. Novotny TE, Lum K, Smith E, *et al.* Cigarettes butts and the case for an environmental policy on hazardous cigarette waste. *Int J Environ Res Public Health*. 2009;6:1691-705.
10. Patel V, Thomson G, Wilson N. Cigarette butt littering in city streets: A new methodology for studying and results. *Tob Control* 2013;22:59-62.
11. Kaufman P, Griffin K, Cohen K, *et al.* Smoking in urban outdoor public places: Behaviour, experiences, and implications for public health. *Health Place* 2010;16:961–968.
12. Patel V, Thomson G, Wilson N. Smoking increases air pollution levels in city streets: Observational and fine particulate data. *Health Place* 2012;18:1202-5.
13. Wilson N, Edwards R, Parry R. A persisting secondhand smoke hazard in urban public places: results from fine particulate (PM2.5) air sampling. *N Z Med J* 2011;124 (1330):34-47.
14. IARC. Tobacco smoke and involuntary smoking. Lyon: IARC, 2004.
15. Thomson G, Wilson N, Edwards R. At the frontier of tobacco control: A brief review of public attitudes to smokefree outdoor places. *Nicotine Tob Res* 2009;11:584-590.
16. Marketing and Communication Research Pty Ltd. Tobacco Laws Awareness and Attitudes Survey 2011 FINAL Report [for Queensland Health]. Marketing and Communication Research Pty Ltd. Brisbane. July 2011.
17. Li J, Newcombe R. Acceptability of extended smokefree areas and smokefree cars. Health Promotion Agency Research and Evaluation Unit. Wellington. May 2013. <http://www.hpa.org.nz/research-library/research-publications/acceptability-of-extended-smokefree-areas-and-smokefree-cars-in-fact>.
18. National Research Bureau. Health Sponsorship Council 2008 health and lifestyles survey: Tables of results. National Research Bureau. Auckland. June 2008.
19. Trappitt R, Li J, Tu D. Acceptability of smoking around other people – Health and Lifestyles Survey 2008 [In Fact]. Health Sponsorship Council. Wellington. February 2011. Accessed August 15, 2013. <http://www.hpa.org.nz/sites/default/files/Acceptability%20of%20smoking-110218.pdf>.
20. Berg CJ, Lessard L, Parelkar PP, *et al.* College student reactions to smoking bans in public, on campus and at home. *Health Educ Res* 2011;26:106-18.
21. Bell K, McCullough L, Salmon A, *et al.* 'Every space is claimed': smokers' experiences of tobacco denormalisation. *Sociol Health Illn* 2010;32:914-29.
22. Kaufman P, Griffin K, Cohen J, *et al.* Smoking in urban outdoor public places: Behaviour, experiences, and implications for public health. *Health Place* 2010;16:961-8.
23. Richardson J, Stanyer J. Reader opinion in the digital age: Tabloid and broadsheet newspaper websites and the exercise of political voice. *Journalism* 2011;12: 983-1003.
24. Ribisl KM, Lee RE, Henriksen L, *et al.* A content analysis of Web sites promoting smoking culture and lifestyle. *Health Educ Behav* 2003;30:64-78.

25. Paek HJ, Kim S, Hove T, *et al.* Reduced Harm or Another Gateway to Smoking? Source, Message, and Information Characteristics of E-Cigarette Videos on YouTube. *J Health Commun* 2013.
26. Elkin L, Thomson G, Wilson N. Connecting world youth with tobacco brands: YouTube and the internet policy vacuum on Web 2.0. *Tob Control* 2010;19:361-6.
27. Cobb NK, Brookover J, Cobb CO. Forensic analysis of online marketing for electronic nicotine delivery systems. *Tob Control* 2013.
28. Jawad M, Bakir AM, Ali M, *et al.* Key health themes and reporting of numerical cigarette-waterpipe equivalence in online news articles reporting on waterpipe tobacco smoking: a content analysis. *Tob Control* 2013.
29. Bondy SJ, Bercovitz KL. Non-smoking worksites in the residential construction sector: using an online forum to study perspectives and practices. *Tob Control* 2011;20:189-95.
30. Myslin M, Zhu SH, Chapman W, *et al.* Using twitter to examine smoking behavior and perceptions of emerging tobacco products. *J Med Internet Res* 2013;15:e174.
31. Park J, Metlay M, Asch J, *et al.* The New York Times Readers' Opinions About Paying People to Take Their Medicine. *Health Educ Behav* 2012;39:725-31.
32. Torrie B. Call to ban smoking from shopping spots. *Dominion Post*. Wellington. July 9, 2012. Accessed August 21, 2012. <http://www.stuff.co.nz/dominion-post/news/7245075/Call-to-ban-smoking-from-shopping-spots>.
33. Chapman K. Smoking ban could help Wellington businesses *The Dominion Post*. Wellington. 11 June 2012. <http://www.stuff.co.nz/dominion-post/business/7078826/Smoking-ban-could-help-Wellington-businesses>.
34. Hunt T. Smoking ban in Wellington parks. *The Dominion Post*. Wellington. 7 June 2012. <http://www.stuff.co.nz/dominion-post/news/7059089/Smoking-ban-in-Wellington-parks>.
35. Levy D. Total smoking ban too difficult - Key. *Dominion Post*. Wellington. July 23, 2012. Accessed July 26, 2012. <http://www.stuff.co.nz/national/politics/7328948/Total-smoking-ban-too-difficult-Key>
36. Fairfax NZ News. 'Ban ciggies from streets'. *Taranaki Daily News*. New Plymouth. July 10 2012. Accessed August 22, 2012. <http://www.stuff.co.nz/taranaki-daily-news/7250215/Ban-ciggies-from-streets>.
37. Ratley N. Smokers fear criminal taint. *Southland Times*. Invercargill. July 11, 2012. Accessed August 22, 2012. <http://www.stuff.co.nz/southland-times/news/7256952/Smokers-fear-criminal-taint>
38. Gillies A. Smokers pollute air on streets: study. *Otago Daily Times*. Dunedin. July 9, 2012. Accessed August 22, 2012. <http://www.odt.co.nz/campus/university-otago/216314/smokers-pollute-air-streets-study>.
39. Fairfax NZ News. Call for The Square to be smokefree *Manawatu Standard*. Palmerston North. August 9, 2012. Accessed August 22, 2012. <http://www.stuff.co.nz/manawatu-standard/news/7445911/Call-for-The-Square-to-be-smokefree>.
40. Cousins J. Drive to end smoking in public. *Bay of Plenty Times*. Tauranga. 10 Oct 2012. <http://www.bayofplentytimes.co.nz/news/drive-to-end-smoking-in-public/1576719/>.
41. Fuatai T. Ban public smoking, official urges. *Hawkes Bay Today*. Hastings. 24 Jan 2013.
42. New Zealand Government. Government Response to the Report of the Māori Affairs Committee on its Inquiry into the tobacco industry in Aotearoa and the consequences

- of tobacco use for Māori (Final Response). New Zealand Parliament. Wellington. March 2011. Accessed November 13, 2013. http://www.parliament.nz/en-NZ/PB/Presented/Papers/8/6/0/49DBHOH_PAP21175_1-Government-Final-Response-to-Report-of-the-M-ori.htm.
43. Bayer R, Colgrove J. Science, politics, and ideology in the campaign against environmental tobacco smoke. *Am J Public Health* 2002;92:949-54.
 44. Wilson H, Thomson G. 'Balancing acts': The politics and processes of smokefree area policymaking in a small state. *Health Policy* 2010;101:79-86.
 45. Rouch G, Thomson G, Wilson N, *et al.* Public, private and personal: qualitative research on policymakers' opinions on smokefree interventions to protect children in 'private' spaces. *BMC Public Health* 2010;10:797.
 46. Satterlund TD, Cassady D, Treiber J, *et al.* Barriers to adopting and implementing local-level tobacco control policies. *J Community Health* 2011;36:616-23.
 47. Thomson G, Wilson N, Howden-Chapman P. The use and misuse of health research by politicians during the development of a national smokefree law. *A N Z Health Policy* 2007;4:24.
 48. McMillen RC, Winickoff JP, Klein JD, *et al.* US adult attitudes and practices regarding smoking restrictions and child exposure to environmental tobacco smoke: changes in the social climate from 2000-2001. *Pediatrics* 2003;112:e55-60.
 49. Heikkinen H, Patja K, Jallinoja P. Smokers' accounts on the health risks of smoking: why is smoking not dangerous for me? *Soc Sci Med* 2010;71:877-83.
 50. Peretti-Watel P, Constance J, Guilbert P, *et al.* Smoking too few cigarettes to be at risk? Smokers' perceptions of risk and risk denial, a French survey. *Tob Control* 2007;16:351-6.
 51. US Department of Health and Human Services. *The Health Consequences of Involuntary Smoking: A Report of the Surgeon General*. Office on Smoking and Health. Rockville, Md. 1986.
 52. US Department of Health and Human Services. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. Atlanta GA. 2006. Accessed November 24, 2012. <http://www.surgeongeneral.gov/library/secondhandsmoke/>.
 53. Drope J, Chapman S. Tobacco industry efforts at discrediting scientific knowledge of environmental tobacco smoke: a review of internal industry documents. *J Epidemiol Community Health* 2001;55:588-594.
 54. Diethelm PA, Ruelle J-C, McKee M. The whole truth and nothing but the truth? The research that Philip Morris did not want you to see. *Lancet* 2005;365:86-92.
 55. Wilson N, Thomson G, Edwards R. Use of four major tobacco control interventions in New Zealand: a review. *N Z Med J* 2008;121 (1276):71-86.
 56. Levy D. Total smoking ban too difficult - Key www.stuff.co.nz. Wellington. 23 July 2012. <http://www.stuff.co.nz/dominion-post/business/7078826/Smoking-ban-could-help-Wellington-businesses>.