

Cigarettes and Candy

A Study of Retailer Compliance with the Point of Sale Tobacco Display Regulations in the 2003 Smoke-free Environments Amendment Act

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CONTENTS

1. Executive Summary	1
2. Introduction.....	5
3. Background	6
Tobacco Consumption Patterns in New Zealand.....	6
Tobacco Marketing and Point of Sale Advertising.....	6
The Law in New Zealand.....	8
Summary	10
4. Rationale and Aims for the Study.....	11
5. Methods.....	12
Store Selection	12
Data Collection	12
Data Entry	14
Analysis.....	14
Reliability Study	15
Ethics Approval	15
6. Results.....	16
Response	16
Compliance Among All Store Types Combined	16
Compliance with Point of Sale Regulations by Store Type.....	19
Number of Breaches of Point of Sale Regulations	19
Breaches of Individual Point of Sale Regulations by Store Type.....	20
Breaches of Point of Sale Regulations by Proportion of Children in Store CAUs..	21
Degree of Non-compliance	21
Non-compliance with Specific Point of Sale Regulations s	22
Stratified Analysis by Store Type	24

Compliance in Urban and Non-urban Retailers	26
Compliance by Deprivation of Stores CAUs	26
Compliance by Ethnicity Profile of Stores CAUs	27
Pacific Islanders	27
Māori	28
Reliability Study	28
Anecdotal Evidence	29
7. Discussion	30
Summary of Findings	30
Interpretation of the Findings	31
Possible Reasons for High Non-compliance	31
Variations in Non-compliance by Store Type	32
Variations in Non-compliance by Demography of Stores CAUs	33
Anecdotal Evidence	33
Reliability Study	34
Loopholes and Inadequacies in Current Point of Sale Regulations	34
8. Policy and Research Recommendations	39
Framework 1: Permit Point of Sale Displays but Strengthen the Regulations and Enforcement Mechanisms	41
Strengthening of Existing Regulations	41
Retailer Education and Increasing Resources for Enforcement	42
Framework 2: Introduce a Complete Ban on Point of Sale Displays	42
Licensing of Tobacco Retailers	43
Recommendations for Future Research	43
9. Conclusion	44
References	45

Appendix One: Suburbs Surveyed.....	47
Appendix Two: Data Collection Form	49

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1. Executive Summary

Introduction

An individual's decision to smoke is influenced by their physical environment, and their social and cultural milieu. The Smoke-free Environments Act of 1990 and the subsequent Amendment Act of 2003 introduced a range of tobacco control measures, including measures on the retail marketing of tobacco products. Such regulation of advertising at the point of sale is generally seen as an important facet of tobacco control, by reducing cues to smoking initiation, and cues for the maintenance and relapse among smokers, as well as by decreasing the social acceptability of tobacco products, through the modification of the retail environment. No evaluation of compliance with the point of sale tobacco regulations in New Zealand has been carried out.

Aims

To investigate retailer compliance with point of sale display requirements under the Smoke-free Environments Act, 1990, and Smoke-free Environments Amendments Act, 2003, in the greater Wellington region.

Methods

Store Selection

We surveyed tobacco retailers – dairies, convenience stores, service stations and supermarkets – located in the lower North Island. We covered all of Wellington, Porirua, Lower Hutt and Upper Hutt, all areas as far north as Levin, and all towns on State Highway 2 as far north as Masterton. We used the online New Zealand Yellow Pages® to formulate a sample list of retailers from the categories - 'service stations', 'dairies', 'supermarkets', and 'convenience stores' in the locations described above. This produced a total of 300 retail stores, which we expected would sell tobacco products.

Data collection

A data collection instrument in the form of a checklist was developed and piloted. The final checklist included nine different categories that related to relevant clauses of the Smoke-free Environments Act 1990, and Smoke-free Environments Amendment Act

2003. An observer visited each store and judged whether the store was non-compliant (✘) or compliant (✔) with each category on the checklist.

We used the Statistics New Zealand's online map (<http://www.stats.govt.nz>) to identify the Census Area Unit (CAU) of each store, and gathered information about the level of deprivation, ethnicity, population density, and age distribution in the 2001 Census of the CAU where each store was located. Observers were blind to the census-related data for the store location when they collected the information on the compliance with the Point of Sale regulations.

Data Entry and Storage

We entered data anonymously into a Microsoft® Access 2000 database.

Reliability Study

To test the inter-observer reliability of our survey instrument, we randomly selected 25 stores in the Wellington City area, and carried out a repeat assessment by a different observer.

Analysis

Data were analysed using Intercooled Stata V9.1. The stores were categorised by NZ Deprivation Index deciles and divided into quartiles according to the proportion of Māori and Pacific Islanders, and the proportion of children (persons < 19 years of age) of the CAU where they were located.

We calculated the proportions and odds of being non-compliant with any, and each separately, of the nine categories of possible breaches of the point of sale regulations. We compared the odds of non-compliance by store type, by urban/non-urban settings (based on population density in the CAU), and by ethnicity, deprivation and proportion of children in the CAU. We used chi-squared tests to test for significant differences, and calculated confidence intervals for proportions and odds ratios.

For the reliability study, we assessed the level of agreement and chance corrected agreement (kappa statistic) for each category of violation and the total number of violations in each store.

Results

Most (over 60%) of the stores did not comply with the point of sale regulations. The three commonest violations were: displaying more than 100 packets and cartons in one display cabinet; having tobacco products that were visible from outside the store; and having tobacco products closer than one metre to children's products. Non-compliance was much commoner among dairies and convenience stores.

Lack of compliance was greatest in stores situated in CAUs with the highest proportion of children. Shops were also more likely to be highly non-compliant (≥ 3 criteria) in areas where there is a large population of children. The increase in non-compliance with the greater proportion of children in the store CAUs was most marked for the display of tobacco products within one metre of children's products, and to a lesser degree for displaying more than 100 packets or 40 cartons at point of sale. These effects were confined to dairies and convenience stores.

There was some evidence of increased non-compliance in stores situated in more deprived areas and with high Pacific Islander, but not with high Māori populations.

We observed some efforts to get around the current regulations (for example through the use of multiple points of sale to allow larger displays). Some regulations appeared ineffective even where stores were technically compliant – for example, in some shops children's products were more than a metre from tobacco displays, but were in the same line of vision.

Discussion

Our study is the first of its kind in New Zealand. The very high level of non-compliance observed indicates that the law is ineffective. Dairies and convenience stores were considerably less compliant than supermarkets and petrol stations. The finding that non-compliance, particularly for placement of tobacco close to children's products, is highest in dairies and convenience stores situated in areas with high densities of children in the local population, is profoundly worrying. As a result, the retail environment in these venues supports the uptake of smoking amongst youth. Evidence of deliberate attempts to circumvent the law by exploiting loopholes are further evidence of the inadequacies of the current regulations and their enforcement.

The lack of compliance observed in this study raises issues regarding information and

enforcement. There appear to be two main contributing factors to the high levels of non-compliance. Firstly, there is a lack of awareness amongst both retailers and the general public regarding the specific requirements of the point of sale regulations. Lack of awareness may be particularly common among dairies and convenience stores. Whether poor awareness of the point of sale regulations among retailers is due to ignorance or also reflects misinformation is unclear. Secondly, there is an almost total absence of enforcement of the law. At present, enforcement is based on a passive system, whereby enforcement officers are restricted to responding to complaints from the general public.

In view of the present inadequacies of the current legislation, we propose two alternative frameworks to address the deficiencies in the current legislation and its enforcement.

Framework 1: Strengthening of the existing legislation in order to reduce inconsistencies in the interpretation of the law, and improvement of retailer compliance through increased education and enforcement.

Framework 2: A complete ban of point of sale advertising for tobacco products.

We suggest Framework 2 is the most credible response to the problems we identified, and the only response likely to unequivocally achieve the purpose of the Smoke-free Environments

Future studies could involve interviewing retailers, and asking them directly about their interactions with the tobacco industry. Future studies could also explore the impact of tobacco product retail displays on the attitudes and behaviour of children to smoking. This study could also be repeated on a larger scale to examine the nationwide patterns of compliance.

2. Introduction

Tobacco products are toxic and addictive, and are a major cause of preventable ill-health and mortality in New Zealand. (Ministry of Health, 2005) An individual's decision to smoke is influenced by their physical environment, and their social and cultural milieu.

The regulation of tobacco marketing is generally seen as an important facet of tobacco control, by reducing cues to smoking initiation, and maintenance and relapse among smokers, as well as by decreasing the social acceptability of tobacco products, through modification of the environment. In New Zealand, a series of tobacco control policies have been introduced, notably through the 1990 Smoke-free Environments Act (SEA (1990)), (Ministry of Health, 1990) and the 2003 Smoke-free Environments Amendment Act (SEAA (2003)). (Ministry of Health, 2003) As a result, marketing of tobacco products in New Zealand is largely outlawed. The main exception is the point of sale display of tobacco products, though this too is the subject of restrictions introduced in the SEAA 2003. No evaluation of compliance with the point of sale tobacco regulations in New Zealand has been carried out.

The aim of this study was to investigate the efficacy of the current point of sale regulations, by assessing the extent to which retailers are compliant with the regulations.

3. Background

Tobacco Consumption Patterns in New Zealand

About 23% of adults smoke in New Zealand. Smoking uptake occurs mainly in teenagers. (Ministry of Health, 2005) Approximately 25% of New Zealand 14-15 years olds smoke at least monthly. Smoking varies by ethnicity, with approximately 21% of non-Maori adults and 44% of Maori being smokers. Maori aged 20-24 year olds have the highest prevalence, at 59%. Smoking prevalence has fallen steadily in recent years, though the decreases in smoking prevalence has been less in the Maori population, with 58% smoking in 1976 and 44% smoking in 2004. For Pacific people the reduction has been even smaller, from 35% to 27% over the same period.

Smoking prevalence is three times higher in families with annual incomes of less than \$20,000, compared with those with an annual income greater than \$120,000. (Crane et al., 2004) Thus tobacco plays a significant role in health inequalities in New Zealand. There is a clear trend towards higher smoking rates among the low-income groups and Maori. (Ministry of Health, 2005)

Tobacco Marketing and Point of Sale Advertising

Tobacco marketing is banned or controlled to various extents in most countries. The tobacco industry has two main aims behind its marketing campaigns. (Di Franza et al., 2006)

1. To stimulate and maintain the demand for tobacco products directly by increasing the number of tobacco consumers, and maintaining and increasing consumption among existing smokers; and indirectly by maintaining the social acceptability of smoking in society. These aims are denied by the tobacco industry, though this denial is widely disbelieved.

2. To increase brand loyalty among smokers. This marketing is primarily targeted at existing smokers and aims to persuade smokers of other brands to switch to the marketed brand, while trying to maintain brand loyalty among existing customers. This is the tobacco industry's only publicly stated aim for its marketing efforts.

Tobacco marketing historically has taken many forms, for example: all forms of mass media (television, radio, magazines etc), general advertising (billboards, shops, pubs etc), special promotions (competitions, tokens etc), direct mail, and sponsorship of

sports, music and the arts and other popular events and activities.

Tobacco marketing has gradually been controlled in many parts of the world. In 1990 most forms of tobacco promotion in New Zealand were banned, apart from point of sale (POS) advertisements, and some tobacco sponsorship exemptions such as private functions and sporting events. (Ministry of Health, 1990) All sponsorship was banned in 1995. (Fraser, 1998)

In New Zealand and internationally, tobacco companies oppose vigorously restrictions on marketing, including point of sale. Where marketing is restricted, the tobacco industry seeks new ways of marketing tobacco, to circumvent restrictions, and to increase marketing resources in areas where it is still allowed.

The use of point of sale tobacco promotion is common worldwide and increasingly important for the tobacco industry as other promotional options are banned. (Dewhirst, 2004; Feighery et al., 2003; Lavack et al., 2006) The increasing importance of POS advertising was shown in a 2001 study, which found that US tobacco companies have dramatically increased the volume of slotting fees, and trade promotions that they pay to retailers, to create a more tobacco friendly retail environment. (Bloom, 2001)

In New Zealand the retail store is now the most important communication channel between smokers, or potential smokers, and the tobacco industry, and the main focus of current marketing efforts as it one of the few methods of tobacco marketing that has not been banned. (Thomson, 2005) The tobacco retail sector includes supermarkets, dairies, service stations, pubs, tobacconists and some liquor outlets. There is evidence that contracts exist between tobacco industry and retailers in New Zealand. (Laugesen, 1999) Tobacco companies spend substantial amounts of money on behind-the-counter displays, with tobacco product displays commonly in special cabinets situated in prime sites at eye level next to tills (where customers must visit to pay for purchases). They include eye-catching displays with cigarettes arrayed in multiple rows. The colour and style of the displays are designed to stand out from the rest of the shop stock. (McCarville et al., 1999)

These displays may act to undermine other tobacco control interventions, by helping to deter current smokers from quitting, provide cues them to light up or buy more cigarettes, and encourage former smokers to start again. (Feighery et al., 2001;

Paynter et al., 2006) Point of sale promotion of tobacco products is known to contribute to spontaneous, unplanned purchasing of cigarettes. (Paynter et al., 2006) It also sends a message that tobacco products areas socially acceptable as any other consumer goods like candy, chocolate and soft drinks.

Point of sale advertising may entice children and young adults to begin smoking.(Feighery et al., 2001; Paynter et al., 2006; Wakefield et al., 2006) There is some evidence of the use of point of sale to market tobacco products to youth. For example, a study in California, found that tobacco brands popular with youth were marketed more in those shops which adolescents used more frequently.(Henriksen et al., 2004)

The tobacco industry has vigorously defended their right to display tobacco at POS. They claim that point of sale marketing is aimed at people who are already smokers, to try and persuade them to switch brands. (Paynter et al., 2006) On purely economic grounds this seems highly unlikely, as the money the industry spends on point of sale advertising is disproportionately large, compared to the possible revenue gained from brand switching (Tilson, 2004). For example, an Australian study shows that less than 1% of people who smoked use point of sale to inform brand choices. (Wakefield et al., 2004)

Point of Sale Regulations in Other Countries:

In Canada, a number of provinces have recently prohibited the retail display of tobacco products. All provinces must be compliant with this by 2008. (Ministry of Health Promotion, 2006; Paynter et al., 2006) In Iceland, Ireland and Thailand, point of sale displays are already prohibited or strictly controlled. Ireland allows registered persons to sell tobacco, and to display one packet, or a pictorial list of packets only on request. Iceland bans the display of tobacco products, as does Thailand. (Paynter et al., 2006) Most states in Australia restrict point of sale displays, with Tasmania considering further restrictions or a ban on point of sale displays. (Paynter et al., 2006; Tasmania Department of Health and Human Services, 2006)

The Law in New Zealand

In New Zealand, the current Smoke-free Environments Act, 1990, and Smoke-free Environments Amendments Act, 2003, requires tobacco retailers to comply with a series of point of sale regulations (box 1). In addition, Section 30(6) of the 2003 Act

requires tobacco retailers to have a notice stating that the sale of tobacco products to those under 18 years is prohibited. (Ministry of Health, 1990, 2003)

Box 1 Point of Sale Regulations in New Zealand

- The display of tobacco products at each 'point of sale' is limited to a maximum of 100 packages and 40 cartons, unless the retailer's place of business is a specialist tobacconist.
- The display must not be visible from outside the shop.
- There is a limit of two packages of the same kind (no block displays)
- The packaging and sale of tobacco with other products at a single price or at a reduced price is prohibited.
- Tobacco products may not be made available free of charge or with some kind of inducement or award or at a reduced rate other than a normal trade discount.
- Tobacco products may not be displayed on the counter-top or similar surfaces whether at point of sale or not.
- Tobacco products may not be displayed within 1 metre of 'children's products' such as confectionary and ice-cream, soft drinks and products that are marketed primarily for children
- If tobacco products are displayed within 2 metres of point of sale, a smoking kills sign must be displayed in clear view of the customer at the point of sale and the sign needs to be at least 100 cm².
- The maximum face size of any displayed tobacco product may not exceed the following dimension; package 66cm² pouch pack 105cm², carton 266cm².

There is considerable uncertainty about the interpretation of the current laws in New Zealand. (Paynter et al., 2006) For example, one of the main disputes is whether the mass display (i.e. more than 100 packets and cartons per display) of tobacco is allowable where there are two or more tills close to each other.

Summary

Point of sale displays are one of the last major marketing avenues available for the tobacco industry in many countries, including in New Zealand. The evidence suggests that in spite of the efforts of governments and tobacco control activists and organisations, the tobacco industry continues to efficiently market its products, partly by increasing its point of sale marketing budgets.

This marketing is likely to reinforce the impression for youth that it is socially acceptable to smoke, and helps to create a ‘smoking-friendly’ environment. There is evidence that point of sale displays successfully target children, make it harder for smokers to quit smoking, and help maintain the tobacco consumption of current smokers. These consequences are almost certainly the main aim of point of sale marketing, rather than the stated intention, which is to create brand loyalty and promote brand switching among existing smokers.

4. Rationale and Aims for the Study

Since the passing of the 2003 Smoke-free Amendments Act, there appears to have been little enforcement of the legislation changes to point of sale displays. In addition, despite extensive literature searching, we were unable to find any studies conducted overseas or in New Zealand that assessed retailer compliance with point of sale laws. We therefore decided to carry out a study to assess compliance with the current regulations in New Zealand.

Since smoking is strongly associated with lower socio-economic status, and Maori and Pacific Island ethnicity, and there is evidence that point of sale displays may specifically target children and youth, we also aimed to assess if compliance with POS regulations varied with the socio-economic status, ethnicity and proportion of children in the local population served by individual stores.

Our hypotheses were that there would be a higher degree of non-compliance with POS regulations amongst tobacco retailers in:

- Areas of higher socio-economic deprivation.
- Areas with a higher proportion of Maori population.
- Areas with a higher proportion of Pacific Islander population.
- Areas with higher proportion of children.
- Areas of lower population density- 'rural' areas'.

5. Methods

Store Selection

We aimed to survey all tobacco retailers located in the lower North Island of New Zealand, excluding specialist tobacconists. The main types of non-specialist tobacco retailers are dairies, convenience stores, service stations and supermarkets.

The sampling frame was all retailers of these types, who were listed in the Yellow Pages (2006) in the areas of:

- Wellington, Porirua, Lower Hutt and Upper Hutt
- Levin, Kapiti Coast and Otaki
- Masterton, Greytown, Featherston, Carterton

For a full list of locations, please see Appendix 1.

We used the online New Zealand Yellow Pages® since this was the most comprehensive available source of retail outlets. Neither Wellington City Council nor Statistics New Zealand maintain a database of retailers. An alternative possible sampling frame was The UBD New Zealand Business Directory. However, this required us to pay a fee to use the directory, and we were uncertain about the degree of completeness of their list of retail businesses.

We identified 300 retailers who were likely to sell tobacco from The Yellow Pages. Two were excluded as they had closed down, and two were excluded because they were not located at the address listed in the Yellow Pages. This left 296 possible tobacco retailers to be surveyed. Stores were allocated according to the judgement of the observers to the four categories of outlets: dairy, convenience store, petrol station and supermarket. The Yellow Pages classifications were changed where they were judged to be incorrect.

Data Collection

The survey was conducted using a pre-piloted checklist, which included nine different categories that related to sections of legislation in the Smoke-free Environments Act 1990, and Smoke-free Environments Amendment Act of 2003. In the pilot, eight students surveyed two shops each using a draft data collection checklist, and changes were made to the original checklist based on a group discussion about problems

encountered.

Ten observers were randomly allocated a location each in which to survey all of the stores. The observer visited stores unannounced and judged whether the store was compliant or non-compliant with each of the nine categories on the checklist. Observers were blind to the census-related data on ethnicity, deprivation and age distribution.

For stores with multiple points of sale with varying non-compliance, we reported compliance levels at the point of sale where non-compliance was most common. For visibility of tobacco products from outside, we assessed this from outside of the forecourt of petrol stations (rather than outside the door of the retail area but within the forecourt), since this is the interpretation of the legislation advised by the Ministry of Health. In assessing proximity of tobacco products to children's products and of the size and proximity of the 'Smoking kills' sign to a point of sale, we used a visual estimate.

The location of the store was defined by its Census Area Unit (CAU). We found the location of each store on the Statistics New Zealand Online Map (<http://www.nowwhere.com.au/StatsNZ/Locator/Default.aspx>) and used the 'area units' tool to identify the CAU. Locations were checked against maps of the store location, where available, from the Yellow Pages® website.

We gathered information about the CAU where the store was located from the Statistics New Zealand website (<http://www.stats.govt.nz>) on:

- The proportion of the population under 19 years;
- The proportion of the population who were Maori or of Pacific ethnicity;
- The socio-economic index for the area;
- Population density.

The raw data on ethnicity, and age distribution for each CAU among the surveyed stores was collated using the "Table Builder" tool from Statistics New Zealand (<http://xtabs.stats.govt.nz/eng/TableFinder/index.asp> accessed between 20-08-06 and 07-09-06, last updated 30 May 2003). Percentage values for each suburb were calculated using Microsoft® Excel 2000.

The New Zealand Deprivation Index 2001 was used as a measure of deprivation for

each CAU. The raw data was found at [http://www.moh.govt.nz/moh.nsf/Files/CAU-deprivation-2001/\\$file/CAU_deprivation_2001.txt](http://www.moh.govt.nz/moh.nsf/Files/CAU-deprivation-2001/$file/CAU_deprivation_2001.txt) (accessed 18-08-06).

The population density of each suburb was manually classified by comparing Urban/Rural profile maps for the Wellington and Manawatu Regions (<http://www.stats.govt.nz/urban-rural-profiles/urban-rural-profile-maps/default.htm> accessed 26-08-06, last updated 18-01-06) to the Statistics New Zealand Online Map showing 'area units' and 'urban areas and rural centres'. For this analysis, anything defined as 'main urban' by Statistics NZ we categorised as 'urban', and anything else as 'non-urban'.

Data Entry

We entered data about compliance and the characteristics of the stores' CAUs into a Microsoft® Access 2000 database. We allocated a code to each store, so that they could be entered into the database anonymously. The code was in the format of a four-letter suburb identifier + code for type of store + a 2 digit number. Once all the data were collected and collated, they were exported into Intercooled Stata V9.1 (StataCorp 2005, College Station, Texas) for analysis.

Analysis

During analysis, we grouped stores according to the following potential determinants of compliance:

- By store type;
- By decile of deprivation. Stores were grouped by the NZDep score of their CAU into: Deciles 1-4 (Low Deprivation), Deciles 5-7 (Med Deprivation), and Deciles 8-10 (High Deprivation);
- By quartiles of the percentage of Māori, Pacific Islanders, and children (<19yrs) in the CAUs;
- As urban or non-urban using the definition described above.

The outcome variables were whether or not the store was compliant with each of the following items on the checklist:

1. Tobacco visible from outside the shop premises;
2. >100 packets or >40 cartons packets on display;

3. Tobacco within 1m of children's products;
4. >2 packets or cartons of the same type displayed at any POS;
5. Countertop displays;
6. 'Smoking kills' sign is visible;
7. 'Smoking kills' sign is correct size;
8. Bundling of tobacco products with other products;
9. Incentives and non-trade discounts.

We also assessed the mean number of violations for different groups of stores, and the number of items of non-compliance and proportion of stores that were very non-compliant (non-compliance with ≥ 3 items on the checklist).

We used simple descriptive statistics to describe the number and rate of violations with 95% CI. We used chi-squared tests and calculated odds ratios (ORs) to test for an association between possible determinants and the outcome variables.

Reliability Study

To test the inter-observer reliability of our method, we randomly selected 25 stores in the Wellington City area to re-survey. These stores were re-surveyed by a different observer. We compared the overall level of compliance and the degree of agreement and chance corrected agreement (kappa statistic) for each checklist item at the 25 stores. One store, which had sold out of cigarettes and thus did not have a point of sale display at the time of survey, was excluded from the re-survey

Ethics Approval

Ethics approval was obtained through the University of Otago's ethical review system (Category B approval).

6. Results

Response

We surveyed 288 out of 296 (97.3%) of eligible stores on the sample frame over 7 days in September 2006. The remaining 8 stores were not surveyed, due to surveyor error. All stores surveyed had tobacco products for sale and had tobacco product displays.

Store Characteristics

The 288 surveyed stores were located in 102 CAUs across the lower North Island. The characteristics of the included stores are shown in Table 1.

Table 1: Demographics of the Sample Population

Deprivation group	N (%)
Low (NZ Dep Classes 1-4)	81 (28)
Medium (NZ Dep Classes 5-7)	88 (31)
High (NZ Dep Classes 8-10)	119 (41)
Urban/non-urban	
Urban	225 (78)
Non-urban	63 (22)
Store Type	
Dairy	141 (49)
Convenience store	35 (12)
Petrol station	83 (29)
Supermarket	29 (10)

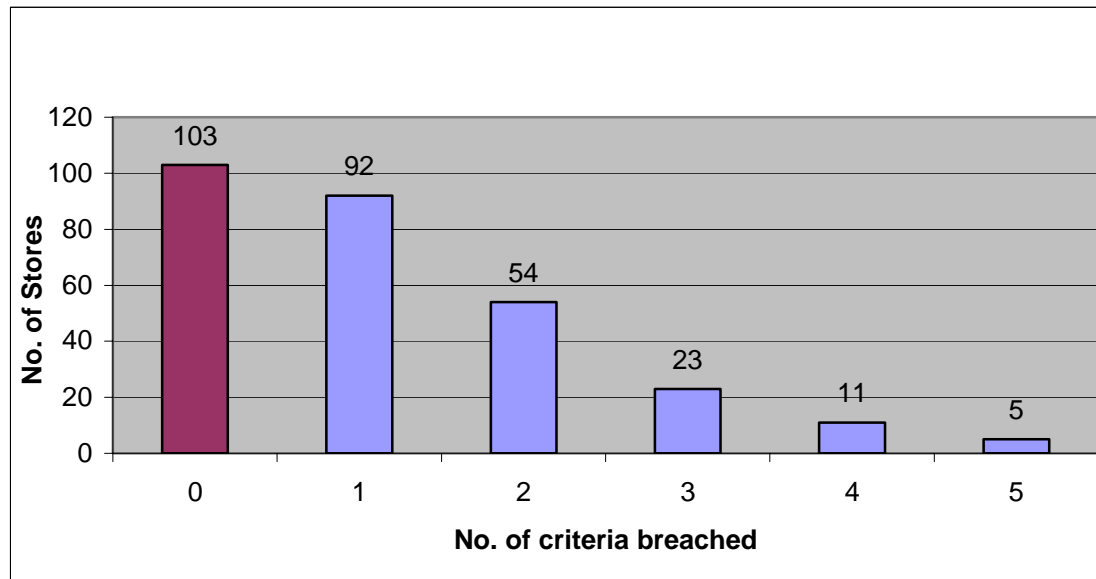
The median proportion of Māori within the 102 CAUs was 10.9% (range 0.05 to 38.5%) and was 4.1% for Pacific Islanders (range 0.0 to 67.7%). The median proportion of children aged < 19 years was 28.1% (range 12.1 to 44.5%).

Compliance Among All Store Types Combined

Overall, 185 out of 288 stores surveyed (64.2%) had at least one breach of the Point of Sale regulations (Figure 1). Half (92/185) of the stores with any non-compliance

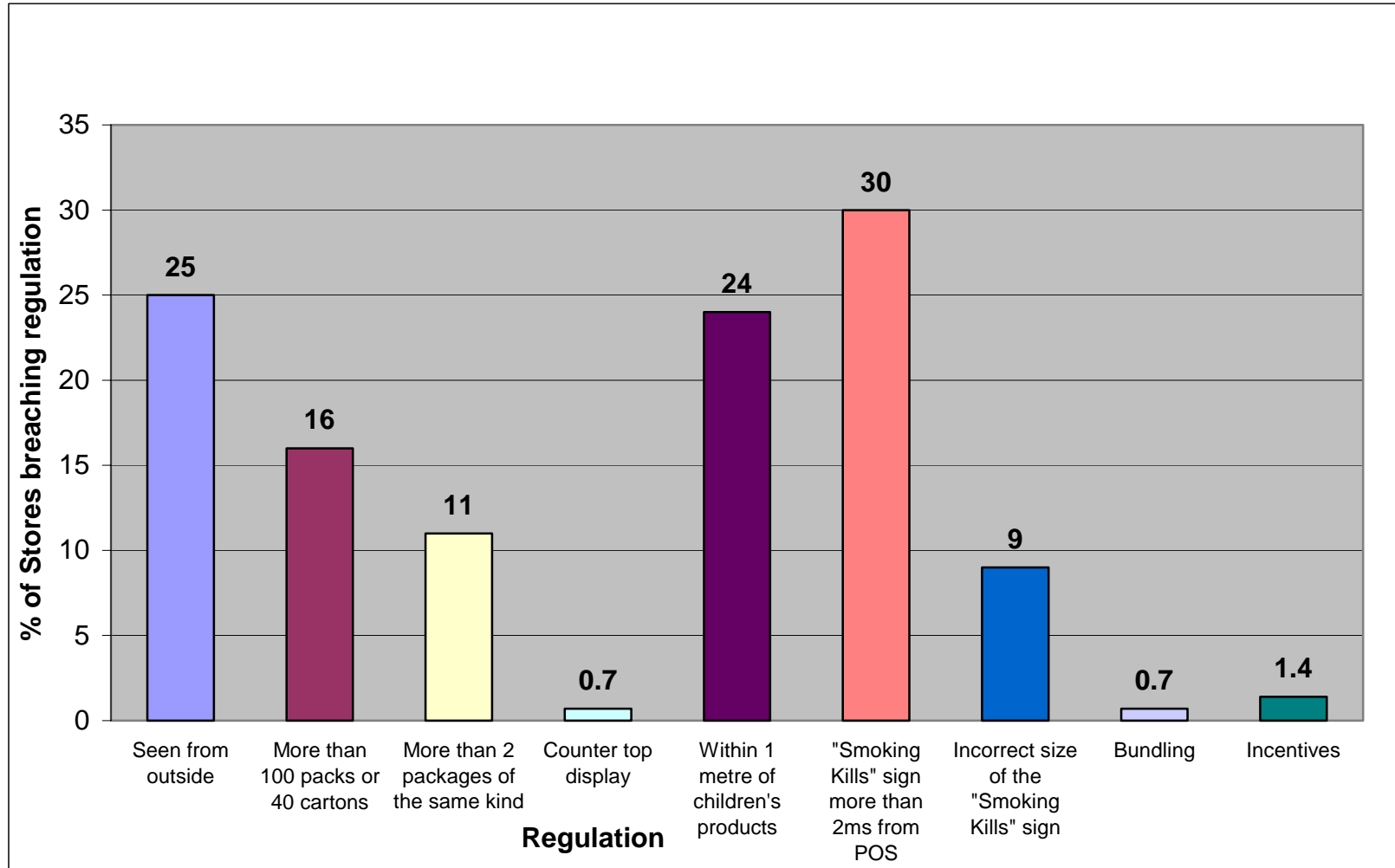
breached one regulation, 29% (54/185) breached two regulations, and 21% (39/185) breached three or more regulations.

Figure 1: Number of Point of Sale Regulations Breached (All Stores)



The commonest breaches of the regulations (Figure 2) were: failure to display a “Smoking Kills” sign (30% of all stores); the point of sale display was visible from outside the store (25%); and tobacco products displayed within 1m of children’s products (24%). There was very low non-compliance with the prohibition of counter-top displays (0.7%), co-packaging or ‘bundling’ of tobacco (0.7%) and offering additional incentives to buy tobacco products (1.4%).

Figure 2: Percentage of Stores Breaching Specific Point of Sale Regulations

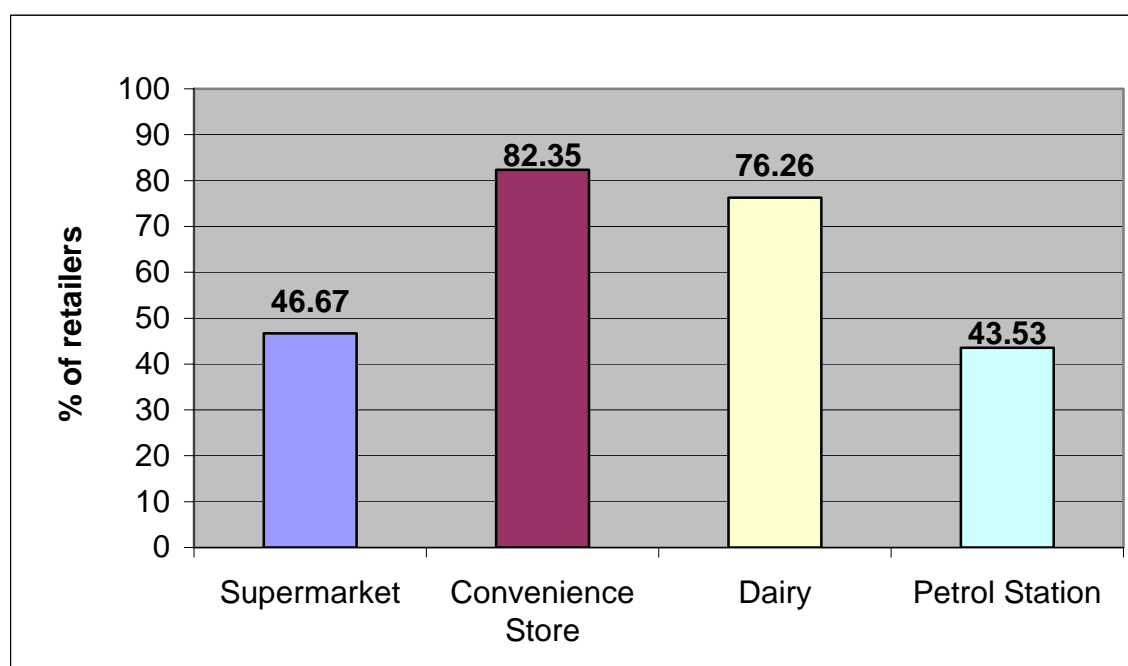


Compliance with Point of Sale Regulations by Store Type

Number of Breaches of Point of Sale Regulations

Nearly all - 82.4% (95% CI 69.4 to 95.3%) of the convenience stores, 76.3% (95% CI 69.1 to 83.4%) of the dairies, 46.7% (95% CI 28.7 to 64.6%) of the supermarkets and 43.5% (95% CI 32.9 to 54.1%) of the petrol stations and were non-compliant with at least one criteria (Figure 3). There was a statistically significant difference in compliance between the four store types (chi squared test, p-value <0.001).

Figure 3: Any Breaches of the Point of Sale Regulations by Store Type



Compared to supermarkets, the odds of any non-compliance were over five times (OR = 5.3, 95% CI 1.5 to 18.4) greater in convenience stores, and almost four times higher in dairies (OR = 3.7, 95% CI 1.6 to 8.6), but not significantly different in petrol stations (OR = 0.9, 95% CI 0.4 to 2.0).

The distribution of the number of the number of items of non-compliance by store types is shown in table 2. Compared to supermarkets the odds of being non compliant with three or more criteria were over four times (OR = 4.3, 95%CI = 0.8 to 22.5) greater at convenience stores, over three times greater for dairies (OR = 3.4 95% CI = 0.7 to 15.3), but less at petrol stations (OR = 0.3, 95% CI 0.0 to 2.6).

Table 2: Degree of Non-compliance by Store Type

Degree of non-compliance	Convenience Stores (%)	Dairies (%)	Supermarkets (%)	Petrol Stations (%)	All stores (%)
None	18	24	53	57	36
1	32	31	33	33	32
2	26	26	7	8	19
≥3	24	19	7	2	13
Total	100	100	100	100	100

The mean number of breaches of the regulations by store type were 1.2 in all stores and 1.8 (95% CI 1.3 to 2.2) in convenience stores, 1.6 in dairies (95% CI 1.4 to 1.8), 0.6 in supermarkets (95% CI 0.3 to 0.9), and 0.6 in petrol stations (95% CI 0.4 to 0.7).

Breaches of Individual Point of Sale Regulations by Store Type

Tobacco products not visible from the outside of premises:

38.2% of convenience stores, 33.8% of dairies, 15.3% of petrol stations and 0% of supermarkets were noncompliant. Differences between store types were statistically significant (chi squared, $p < 0.001$).

Less than 100 packages and/or 40 cartons displayed at Point of Sale:

32.4% of convenience stores, 18.7% of dairies, 9.4% of petrol stations and 3.3% of supermarkets were non compliant (chi squared, $p = 0.003$).

Not more than two packages or cartons of the same type at Point of Sale:

20.6% of convenience stores, 16.7% of supermarkets, 11.5% of dairies and 3.5% of petrol stations were noncompliant (chi squared, $p = 0.027$)

Tobacco products further than one metre from children's products:

38.2% of convenience stores, 33.8% of dairies, 7.1% of petrol stations and 6.7% of supermarkets were noncompliant (chi squared, $p < 0.001$).

Smoking kills sign is compliant (present, visible and required size):

40% of supermarkets, 36.7% of dairies, 32.35% of convenience stores and 14.1% of petrol stations were noncompliant (chi squared, $p= 0.002$).

No tobacco products visible on countertop:

There were only two instances of tobacco products being displayed on the countertop both of which occurred in dairies.

No bundling of cigarettes:

There were only two instances of bundling of cigarettes, one in a dairy and one in a convenience store.

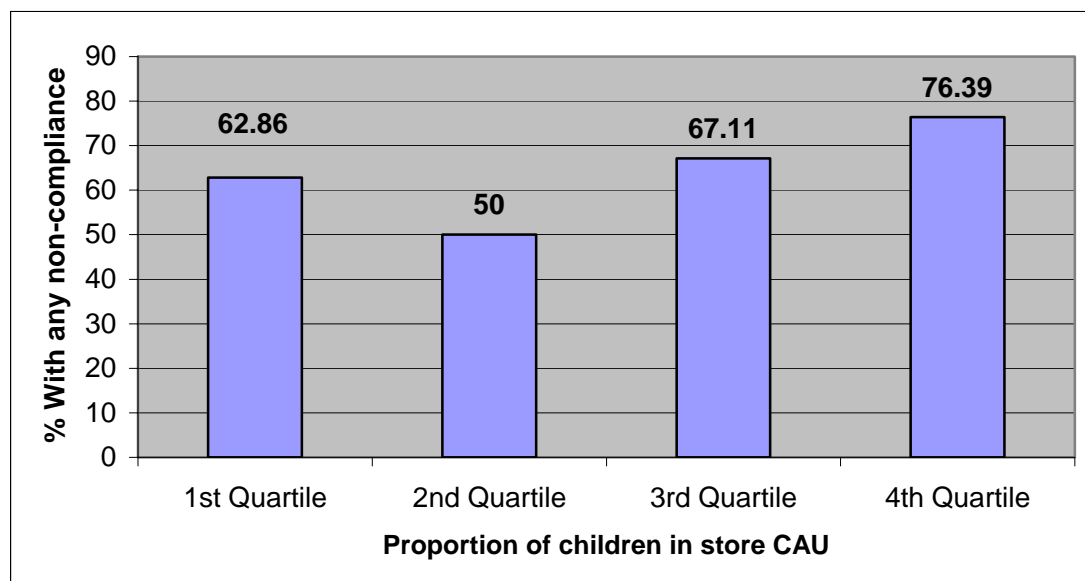
No incentives or rewards on offer:

There were four instances of incentives or rewards being offered. Three occurred in dairies and one in a convenience store.

Breaches of Point of Sale Regulations by Proportion of Children in Store CAUs**Degree of Non-compliance**

We divided the stores into quartiles according to the percentage of the children (age <19 yrs) in their CAU. Stores with the greatest proportion of children were most likely to be non-compliant with one or more of the point of sale regulations (figure 4).

Figure 4: Percentage of Non-compliant Retailers by Quartiles of the Proportion of Children in Store CAUs



The mean number of breaches was 1.1 (95%CI 0.8 to 1.3) in the first quartile, 0.9 (95%CI 0.6 to 1.2) in the second, 1.0 (95% CI 0.8 to 1.2) in the third, and 1.8 (95% CI 1.4 to 2.1) in the fourth quartile. The odds ratios for any breach of the point of sale regulations in relation to stores in the first quartile were 0.6 (95%CI 0.3 to 1.2) for the 2nd quartile, 1.2 (95%CI 0.6 to 2.4) for the 3rd quartile, and 1.9 (95%CI 0.9 to 4.0) for the 4th quartile.

Stores with CAUs for the proportion of children in the 4th quartile were also far more likely to be very non-compliant (non-compliance with at least three criteria). Thus, 7% of the shops in the 1st quartile, 10% in the 2nd quartile, 5% in the 3rd quartile and 32% in the 4th quartile were non-compliant with ≥ 3 criteria. The odds ratio for non-compliance with ≥ 3 criteria in the 4th vs 1st quartile CAU stores was 6.1 (95% CI 2.0 to 18.2).

Non-compliance with Specific Point of Sale Regulations

We assessed the degree of non-compliance with the four most commonly violated criteria by quartiles of the proportion of children in the store CAU. There were significant differences between the quartiles for violations of the number of packages or cartons of tobacco displayed (chi squared, $p < 0.001$) and for displaying tobacco products within a metre of children's products (chi squared, $p < 0.001$). This data is shown graphically in figures 5 and 6. There was no particular pattern and no statistically significant differences in violations by quartile of the proportion of children in the CAU for tobacco displays being visible from the outside or the 'Smoking kills' sign not being displayed (data not shown).

Figure 5: Percentage of Stores with Tobacco Products within 1m of Children’s Products by Quartiles of the Proportion of Children in Store CAUs

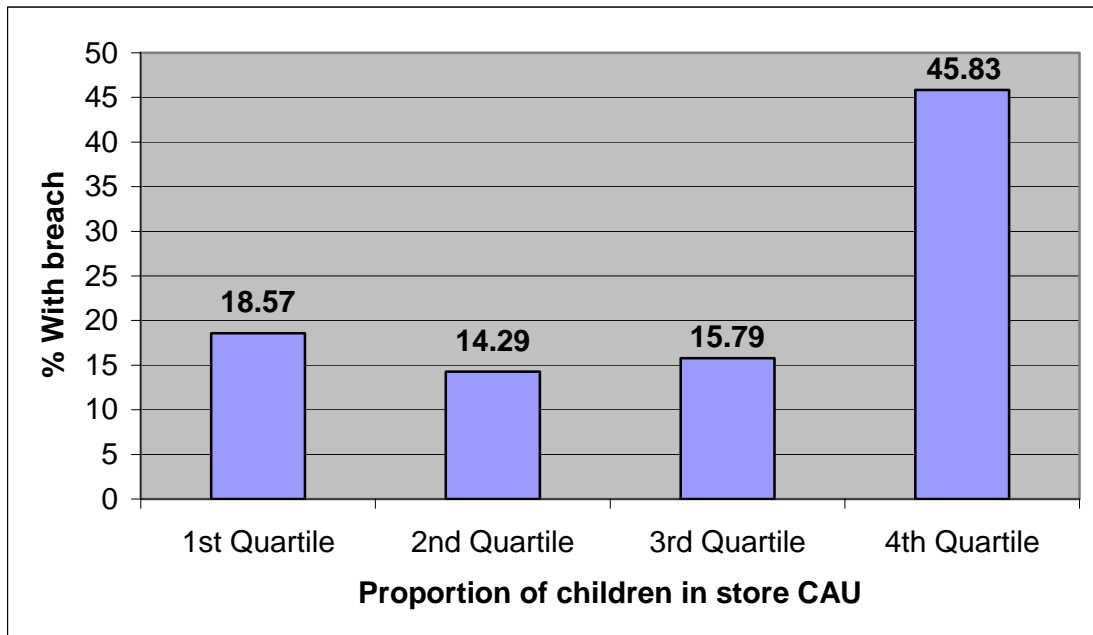
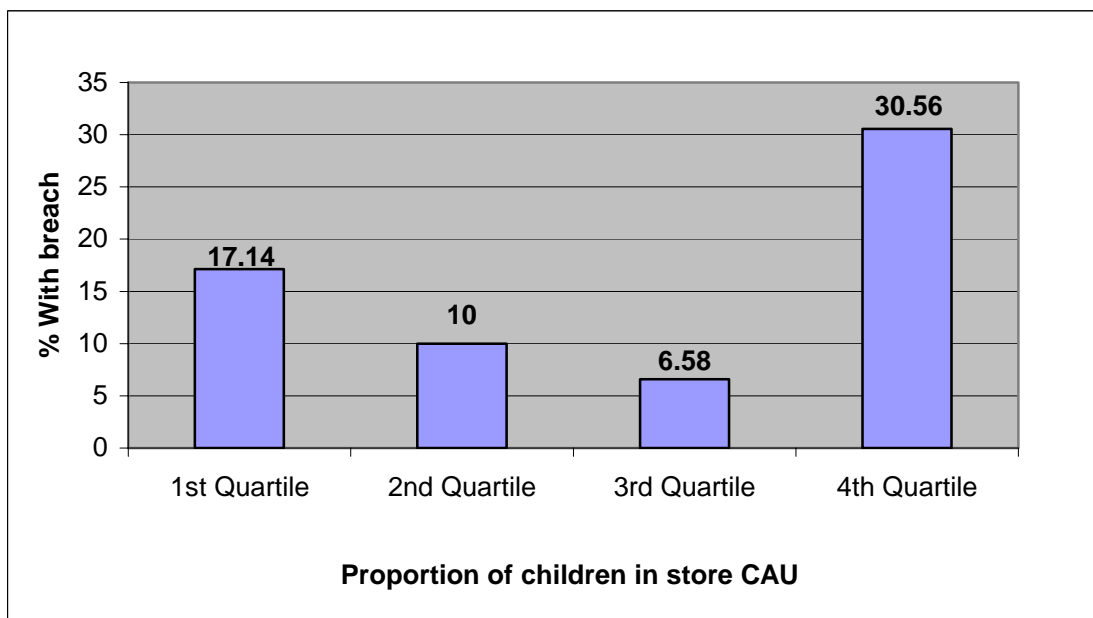


Figure 6: Percentage of Stores Displaying More Than 100 packages or 40 Cartons of Tobacco Products by Quartiles of the Proportion of Children in Store CAUs



Compliance with these four categories of breaches of the POS regulations in the stores in the CAUs with the highest proportion of children relative to stores in the lowest quartile are shown in table 3. There was a large and statistically significant increase in the odds of breaching the regulations for displaying tobacco products close to children's products. There was a smaller non statistically significant increase in the odds of breaching the regulation for displaying more than 100 packets or 40 cartons of cigarettes, and little difference in odds of breaching the regulations about the visibility of the 'Smoking kills' sign and the tobacco products display being visible from outside the premises.

Table 3: Compliance with Commonly Breached Point of Sale Regulations in Stores in the 1st and 4th Quartiles for Proportion of Children < 19 Years in the Stores CAUs

	Non-compliance in quartile 1 (%)	Non-compliance in quartile 4 (%)	OR for non- compliance (95% CI)
'Smoking kills' sign not visible	30.0	34.7	1.2 (0.6 to 2.5)
Tobacco products within 1m of children's products	18.6	45.8	3.7 (1.7 to 8.2)
Display visible from outside	25.0	27.1	0.9 (0.4 to 1.9)
Over 100 packs and cartons	17.1	30.6	2.1 (0.9 to 4.8)

Stratified Analysis by Store Type

There was a higher proportion of dairies and convenience stores among stores from CAUs with the highest proportions of children (quartile 4). The distribution of store types could therefore be a confounding factor in the above analyses, as breaches of the POS regulations were more common in dairies and convenience stores. We therefore re-analysed the data and assessed non-compliance among dairies and convenience stores, and petrol stations and supermarkets separately (table 4).

Table 4: Compliance with Most Commonly Violated Categories in Dairies and Convenience Stores in the 1st and 4th Quartiles for Proportion of Children < 19 Years in the Stores CAUs

	Dairies and convenience stores			Supermarkets and petrol stations		
	Non-compliance in quartile 1 (%) n = 43	Non-compliance in quartile 4 (%) n = 56	OR for non- compliance (95% CI)	Non-compliance in quartile 1 (%) n = 27	Non-compliance in quartile 4 (%) n = 16	OR for non- compliance (95% CI)
Any violations	67.4	83.9	2.5 (0.9 to 6.7)	44.4	50.0	0.8 (0.2 to 2.8)
≥ 3 violations	11.6	39.3	4.9 (1.6 to 15.3)	0.0	6.3	NA
‘Smoking kills’ sign not visible	32.6	37.5	1.2 (0.5 to 2.9)	25.9	25.0	1.0 (0.2 to 4.0)
Tobacco products < 1m from children’s products	23.3	55.4	4.1 (1.6 to 10.4)	11.1	12.5	1.1 (0.2 to 7.9)
Display visible from outside	34.8	30.3	0.8 (0.3 to 1.9)	14.8	6.3	0.4 (0.0 to 3.9)
Over 100 packs and cartons	16.3	37.5	3.1 (1.1 to 8.4)	18.5	6.3	0.3 (0.0 to 2.9)

The results in table 4 show that the pattern of increased non-compliance in areas with the highest proportion of children was seen only among dairies and convenience stores. The mean number of breaches increased from 1.3 (95% CI 0.9 to 1.6) in the first quartile to 2.1 (95% CI 1.7 to 2.5) in the fourth quartile among these stores, but was 0.8 (95% CI 0.5 to 1.1) and 0.6 (95% CI 0.2 to 1.0) for the same quartiles among petrol stations and supermarkets. The odds ratio for any non-compliance in supermarkets and petrol stations in the stores in CAUs with the highest proportion of children was 0.8 (95% CI 0.2 to 2.8), and there were no significantly increased ORs for non-compliance of supermarkets or petrol stations for any of the commonest four violations, including for proximity of cigarettes to children's products (OR = 1.1, 95% CI 0.2 to 7.9).

Compliance in Urban and Non-urban Retailers

We found no significant differences in the likelihood of breaches of the POS regulations among shops (all subtypes) in urban and non-urban areas - 68% of the shops in the urban areas were non compliant, compared to 63% of the shops in the non-urban areas. Thirteen per cent of the shops in the urban areas were non compliant with ≥ 3 criteria compared to 14% of the shops in the non-urban areas. The mean number of breaches of the regulations were not significantly different (data not shown).

Compliance by Deprivation of Stores CAUs

Stores within CAUs in the low, medium and high deprivation groups had non-compliance rates for *any* of the criteria of 70.3%, 56.8% and 65.5% respectively, and a mean number of breaches of 1.2 (95% CI 1.0 to 1.5), 0.9 (0.7 to 1.2), and 1.3 (1.1 to 1.6) respectively. Differences in the proportion with any non-compliance between the three groups were not statistically significant (chi squared, $p = 0.172$).

There was a trend towards greater non-compliance for ≥ 3 categories with greater deprivation, with 11%, 10% and 18% among respectively non-compliant among stores in low, medium and high deprivation CAUs (chi squared, $p = 0.23$). The odds ratio for non-compliance with ≥ 3 regulations among stores in high vs low deprivation CAUs was increased, but was not statistically significant (OR 1.7, 95% CI 0.7 to 4.0). Repeating the analysis after excluding stores from CAUs within the Central Business District of Wellington (where deprivation scores may bear little resemblance to the

socio-economic profile of the customers) did not greatly affect these results.

When the analysis was restricted to dairies and conveniences stores, the mean number of breaches increased from 1.4 (95% CI 1.1 to 1.7) in the lowest deprivation group to 1.8 (95% CI 1.5 to 2.2) in stores in the most deprived CAUs. The OR for ≥ 3 criteria breached in the high deprivation CAU stores was significantly increased at 3.1 (95% CI 1.1 to 8.4).^a The proportion of dairies and convenience stores which were non-compliant with ≥ 3 criteria varied from 12.7% (95% CI 3.8 to 21.6%) in the least deprived CAUs to 31.0% (95%CI 19.2 to 42.9%) in the high deprivation group. There was no evidence of increased non-compliance among stores in the most deprived areas when the analysis was restricted to supermarkets and petrol stations.

Compliance by Ethnicity Profile of Stores CAUs

Pacific Islanders

We divided the store CAUs into quartiles, depending on the proportion of Pacific Islanders (PI) living in the area. For any non-compliance, we found little difference between quartiles, with the lowest and highest PI proportion quartiles having 74.6% and 68.9% non-compliance respectively. However, there were differences in the degree of non-compliance with ≥ 3 criteria by the proportion of PI in the store CAU. Thus, 22.9% of the shops in the highest quartile of PI population were non-compliant with ≥ 3 criteria, compared to 8.45% of the shops in the lowest quartile. The mean number of breaches increased from 1.2 (95% CI 0.9 to 1.4) in stores in CAUs with the lowest quartile for proportion of PI, to 1.6 (95% CI 1.2 to 1.9) in the highest quartile. The odds of being non-compliant with ≥ 3 criteria were over three times higher (OR 3.2, 95% CI 1.2 to 9.0) in shops in CAUs with the highest quartiles for proportion of Pacific Islanders, compared to those in the lowest proportion PI quartile.

When supermarkets and petrol stations were excluded to account for possible confounding, the patterns shown above were still present with no significant difference in *any* non-compliance over the four PI quartiles, but higher levels (34%, 95% CI 20.7 to 47.3%) of non-compliance with ≥ 3 criteria in shops in CAUs in the

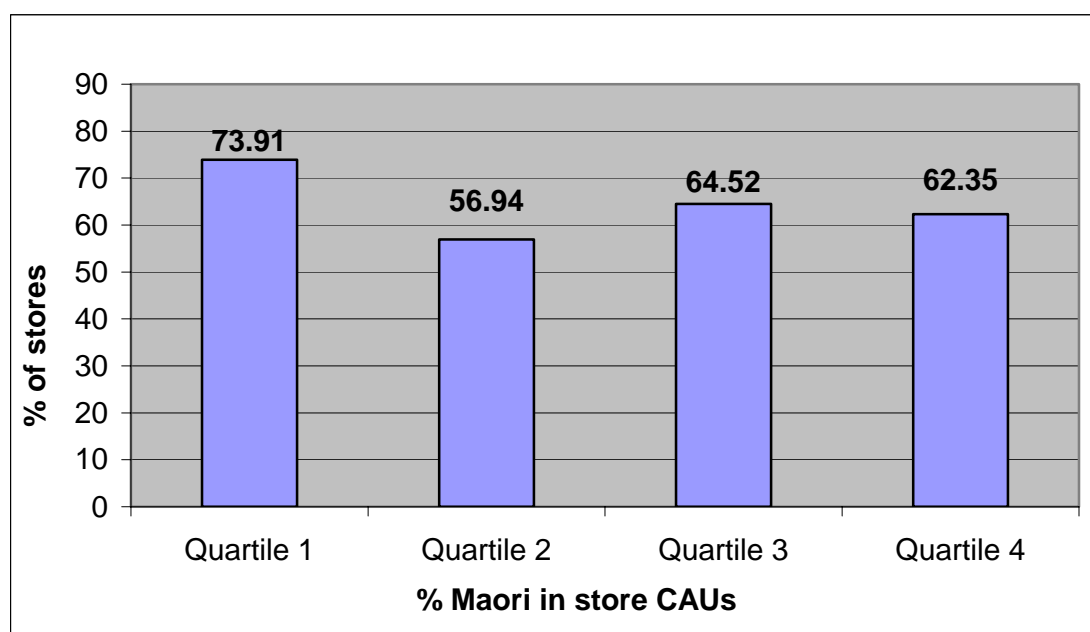
^a These figures exclude stores located in Wellington Central Business district, though the figures remained similar if they were included

highest PI quartile compared to 8.2% (95% CI 4.2 to 15.9%) in the lowest PI quartile, odds ratio 5.8 (95% CI 1.7 to 20.2). The difference in mean breaches was greater, being 1.3 (95% CI 1.0 to 1.6) in the lowest PI quartile and 2.0 (95% CI 1.6 to 2.4) in the highest quartile.

Māori

There was no statistically significant differences found in the levels of any non-compliance (figure 7), mean number of breaches of the regulations, or non-compliance with ≥ 3 criteria (data not shown) between the stores by quartile of Maori among the CAU populations. Nor were there any significant differences apparent when analysis was restricted to dairies and convenience stores.

Figure 7: Percentage of Stores with Any Breaches of Point of Sale Regulations by Quartiles of Percentage Māori in the Stores CAUs



Reliability Study

The overall level of agreement between observers for their assessment of compliance with each of the nine categories varied between 70 - 100%. Analysis using kappa statistics were generally difficult to interpret due to the small numbers of violations in each category, and hence the high agreement expected by chance.

The most important finding was that the number of breaches detected at the 24 stores included in the reliability study increased from 27 in the main survey to 38 in the re-

survey. The increase was due to greater reporting of breaches of tobacco products being on display within one metre of children's products, and more than two packs of the same kind being displayed next to each other. The results suggested that there was a learning effect for these two categories, with observers in the repeat assessment more likely to identify breaches of the regulations. Reporting of breaches of other regulations fluctuated approximately equally between the survey and re-survey.

Anecdotal Evidence

While conducting the survey, some of the observers engaged in conversation with the retailers about the tobacco display units, and about any incentives provided by the tobacco companies. Five such conversations occurred.

During these conversations the most of the retailers stated that the tobacco companies provided the tobacco display units, though most denied receiving any incentives. One of the retailers commented that the "Horizon" brand of cigarettes gave them a free supply of cigarettes for a week if they displayed the cigarettes in a certain manner. However, this retailer had poor English language ability, so these comments were hard to interpret, and may have been misunderstood.

One retailer commented that the tobacco company provided a display unit on the condition that the retailer displayed at least 80% of their particular brand of cigarettes in the unit. Another retailer was offering incentives and advertised a 20 cent per packet discount on a home-made sign. One retailer commented that a particular Indian brand of cigarettes gave the retailer three free cartons to try. Several of the five retailers noted that tobacco companies checked the tobacco product displays regularly, generally between once a week and once a month.

A general observation was that the observers who spoke to retailers found that they were quite willing to share information about their interactions with the tobacco companies.

7. Discussion

Summary of Findings

Most (over 60%) of the stores did not comply with the point of sale regulations. The non-compliance rate of 64% suggests that the point of sale regulations in New Zealand are largely ineffective. The three commonest violations were: displaying more than 100 packets and cartons in one display cabinet; having tobacco products that were visible from outside the store; and having tobacco products closer than one metre to children's products. Non-compliance was much commoner among dairies and convenience stores.

Lack of compliance was greatest in stores situated in CAUs with the highest proportion of children. Shops were also more likely to be highly non-compliant (≥ 3 criteria) in areas where there is a large population of children. The increase in non-compliance with the greater proportion of children in the store CAUs was most marked for the display of tobacco products within one metre of children's products, and to a lesser degree for displaying more than 100 packets or 40 cartons at point of sale. These effects were confined to dairies and convenience stores.

There was some evidence of increased non-compliance in stores situated in more deprived areas and with high Pacific Islander, but not Māori populations.

Another important finding was that *all* retailers surveyed had tobacco products on display. The included stores are the main outlets for essential items like food and drink, newspapers, and petrol for most people, and one or more are present in almost all populated areas. This illustrates how widely available and how widely marketed tobacco products are in the retail environment, and in the New Zealand population.

Strengths and Weaknesses of the Study

The study had a number of important strengths. Firstly, selection bias was minimised by aiming to include all retail outlets in the study area. Over 97% (288/296) of eligible retail outlets were surveyed. The sample size was large resulting in reasonable precision of estimates of compliance. The survey was carried out over one week so the results give a good estimate of compliance at a single point of time. Observers were blind to the demographic features of the CAUs of the stores that they surveyed, reducing the risk of observer bias. The method of data collection was improved

following a pilot study. The results of the reliability study suggest that the estimates of non-compliance were conservative. Linkage with the CAU census data allowed us to explore specific hypotheses about possible influences on non-compliance with the point of sale regulations

There were some weaknesses. Eight shops were not surveyed due to observer error. Potentially more important, the sampling frame is unlikely to have been comprehensive – for example, a proportion of retailers who sell tobacco will not be listed in Yellow Pages, or will be included in other sections than those used to generate the sampling frame. The numbers of these outlets are difficult to quantify, but from observations during the survey are likely to be modest. It is also difficult to see any reason why non-included tobacco retailers should be systematically more or less compliant with the point of sale regulations, so non-inclusion of these retailers is unlikely to have introduced significant bias.

The survey excluded bars, clubs, and tobacconists or other specialist tobacco retailers. For tobacconists, this was because the legislation for these retailers is different. Bars, clubs, restaurants and other hospitality venues were not surveyed because of the different patterns of tobacco display – most tobacco is sold through staff-controlled vending machines. This does not invalidate our findings, but does mean we cannot comment on compliance with the point of sale regulations in these sectors. This could be an area for future research.

Finally, some aspects of the data collection process were necessarily imprecise –given the use of visual estimates. The findings of the reliability study suggest that these visual estimates were conservative in the initial survey.

Interpretation of the Findings

Possible Reasons for High Non-compliance

We suggest that there are two main factors contributing to the high rate of non-compliance. Firstly, a lack of awareness amongst retailers and the general public regarding the specifics of tobacco laws and regulations. For example, although 86 retailers did not have the required ‘Smoking kills sign’, the majority of stores displayed an 18+ sign. This may indicate that retailers may not be aware of what is required of them regarding signage.

Secondly, there is an almost total absence of enforcement of the law. At present,

enforcement is based on a passive system whereby enforcement officers are restricted to responding to complaints from the general public (very few of whom are likely to know the details of the law). This gives rise to an absurd situation in which even though non-compliance is very common, violations are unlikely to be reported and hence enforcement action is highly unlikely. In addition, the survey revealed that at least in the study area of lower North Island, there is no readily accessible list of retailers who sell tobacco products. This will make systematic pro-active enforcement more difficult to achieve, if it were to be implemented.

Variations in Non-compliance by Store Type

Dairies and convenience stores were considerably less compliant than supermarkets and petrol stations. This may be due to inherent differences in the nature of these stores. Supermarkets and petrol stations are usually part of larger franchises or directly owned chains, which impose strict criteria on how stores are operated, and may be more aware of regulations affecting retailers. Petrol stations and supermarkets are also well-known brands, and may have stronger incentives to comply with regulations. Conversely, dairies and convenience stores are smaller and less conspicuous. They are also largely independently owned and operated. This may lead to low rates of awareness of the tobacco regulations, and greater willingness to flout regulations. In addition, cigarette sales may make up a higher proportion of total income for these stores, and so there may be a greater incentive to promote the sale of tobacco.

Retailers in dairy and convenience stores may argue that compliance with the one metre from children's products is limited by the size of the shop. Moreover, as both cigarettes and children's products such as confectionary are often the target of shoplifting, they need to be placed near the counter for security reasons. However, in the course of our study we did not come across any shops in which it would not have been practical to distance the two products by one metre while keeping both products within view of the retailer. In addition, even if the retailer displays cigarettes and children's products together, purely innocently, without the intention of creating a connection between the two, they are still in breach of the spirit of the law if the net effect is a visual association between the two products. Interpretation of the law should look to the consequence not the intent.

Similarly, the size of the shop could be argued as a factor for tobacco products being visible from outside the store. However, all of the shops in our survey were large enough to allow the tobacco display to be positioned in such a way that it was not visible from the street.

Variations in Non-compliance by Demography of Stores CAUs

Most smokers start before the age of 16 years. They are therefore a key potential market for the tobacco industry. Our results show that in areas where there are a high proportion of children, non-compliance with POS regulations is more prevalent among dairies and convenience stores. Whether this is by accident or design is not clear from our survey. However, the evidence that the clearest association is with violations of the regulation that tobacco products should be displayed at least one metre away from children's products suggests it may, at least in some cases, be the latter. However, the end result is the same; the current retail environment continues to allow widespread marketing of tobacco products to children, and that marketing is most conspicuous and likely to breach to POS regulations in dairies and convenience stores situated in areas where the proportion of children is highest. The lack of association found in supermarkets and petrol stations is probably for similar reasons to those cited above, for lower non-compliance in these stores.

Given the very high rate of smoking among Māori, we hypothesised that there would be greater non-compliance with POS regulations in stores situated in high Māori areas. We found no evidence for this. However, there was a correlation between areas of high Pacific Islander population density and stores with three or more breaches of the POS regulations. It is possible that this association was confounded by the proportion of children in the store CAU, since Pacific Island communities tend to have a higher proportion of children in their populations. Further analysis would be required to test this hypothesis. We also hypothesised that there would be greater non-compliance amongst the more deprived suburbs. This was because there is a higher burden of smoking amongst lower socio-economic groups. We found evidence only of an association between multiple non-compliance and deprivation among dairies and convenience stores.

Anecdotal Evidence

There were only a few conversations with retailers, so the comments may not be

representative. However, the observers found that most of the retailers were willing to talk about their tobacco displays, incentives and dealings with tobacco industry representatives. This suggests this could be a fruitful area for further research. The comments were particularly interesting, in exposing the degree to which tobacco industry representatives are in regular contact with retailers about point of sale displays –a stark contrast to the degree of scrutiny from the enforcement processes.

Reliability Study

The reliability study suggested that at least for the assessment of proximity to children's products and number of packages in a display, that there was a learning effect among observers – with breaches more likely to be identified by more experienced observers. This suggests that we potentially underestimated the level of non-compliance with the POS regulations, and that future surveys should incorporate careful training and a period of practice for observers.

Loopholes and Inadequacies in Current Point of Sale Regulations

Even if retailers are compliant, the wording of the law allows for loopholes, which defeat the purpose of the act. The main areas of concern relate to the size of the tobacco product display where there are multiple points of sale close together, and the regulation on the proximity of the display to children's products. Examples of these problem areas with the current POS regulations were identified during the conduct of the study.

The current law requires that; '...no more than 100 packages are displayed at any point of sale.'[Part 2 s 23 A (2b)]. However, the act mitigates this requirement by stating: '.....tobacco products are exposed for sale at a point of sale if they are exposed for sale at a place.....that is not closer to some other point of sale than to the point of sale' [Part 2 s 23 A 6]. As a result of this latter subsection, retailers are able to have displays exceeding 100 exposed packages by combining the displays of two points of sales. This is shown in the photo below:

Figure 7.1: Point of Sale Displaying More Than 100 boxes

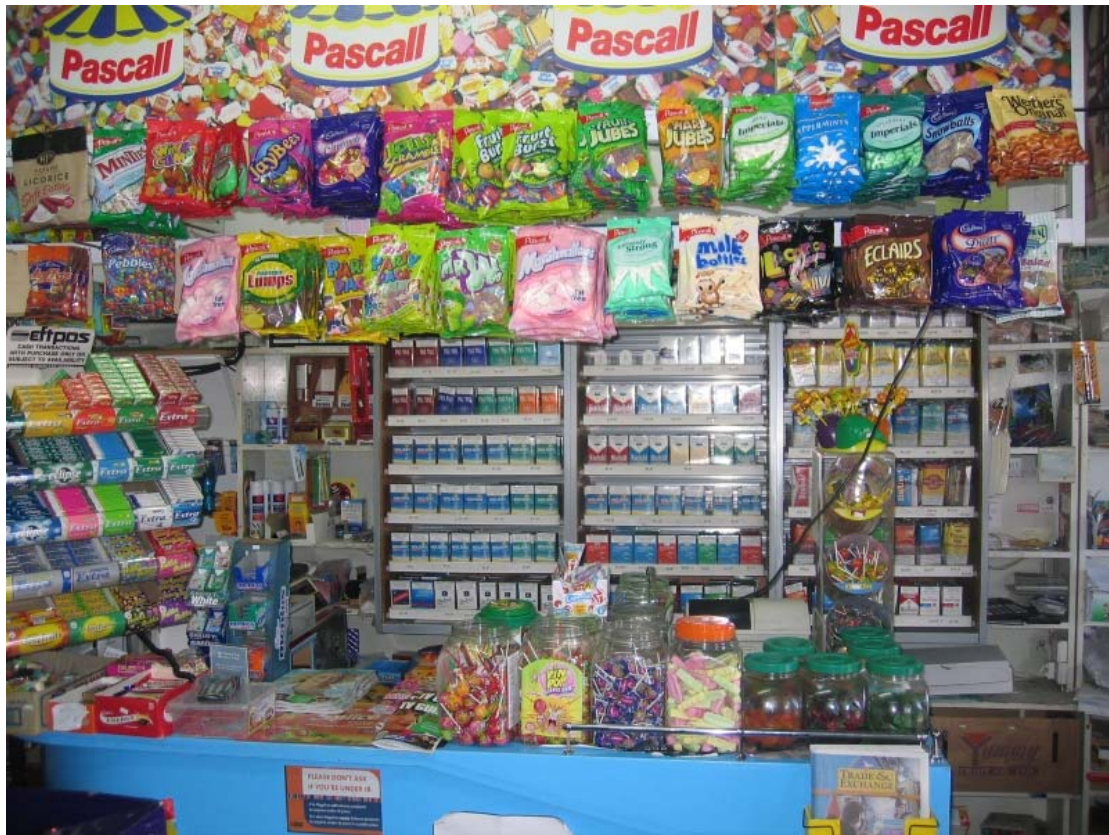


This loophole appears to be well known as some retailers had large displays with redundant tills designated as a point of sale. Some of these tills were not even plugged in. Currently, there is nothing in the Act that specifies that displays next to multiple points of sale must be separated.

Regarding proximity to children's products, Part 2 s 23 A 2 (i) I of the 2003 Act states: 'no tobacco product is exposed for sale within one metre of any children's product'. Children's products are defined as: '*Products such as comics, games and toys marketed primarily for children and includes confectionary, ice cream, soft drinks and other similar products*'.

The apparent purpose of s 23 A 2 (i) I, is to dissociate tobacco products from children's products. As there is no possibility of the tobacco products physically contaminating the children's products, the inference is that the dissociation is meant to be a visual one. However, the one metre rule is often ineffective in achieving this purpose as it still allows tobacco products and children's products to be framed in the same visual field, as shown in the photo below.

Figure 7.2: Example of a Tobacco Display More Than One Metre from Children’s Products, but within the Same Visual Field



At present, regulations relating to point of sale displays are restricted to tobacco products, which are specified in the 2003 Smoke-free Amendment Act as follows; *“Tobacco product means any product manufactured from tobacco and intended for use by smoking, inhalation, or mastication...”*.

This means that there are currently no restrictions on tobacco specific goods such as filters and filter paper. While it is reasonable that other smoking paraphernalia such as lighters be exempt from regulation as they have a multitude of other uses, it is difficult to conceive an alternative (legal) use for filters and filter papers, other than their use for smoking. This allows retailers to have promotions related to these products as seen in the photo below.

Figure7.3: Promotions for Sale of Tobacco



This gives rise to an inconsistency in the law, which allows certain tobacco specific accessories to escape the regulation that tobacco products are subject to.

Finally, another area of concern relates to pricing labels being used as marketing mediums. The law specifies in Part 2 Section 22 (1) and (2):

- (1) *Subject to the succeeding provisions of this section and to section 23, no person shall publish, or arrange for any other person to publish, any tobacco product or advertisement in New Zealand.*
- (2) *Nothing in subsection (1) shall apply to any price list given to retailers of tobacco products if the price list includes the health messages required by or under this Part.*

In the course of our survey, we came across shops that had pricing labels for particular brands of cigarettes that were of a larger size than the other labels, and which bore the trademark typeface of the brand in question. In addition, the price label did not include a health message. This is shown in the photo below.

Figure 7.4: Prominent Price Labelling of Tobacco Products



This has the effect of drawing attention to that particular brand of cigarette. It is debatable as to whether or not this constitutes marketing as distinct from price listing. However, the Act defines tobacco product advertisement as; ‘...*any words, whether written, printed, or spoken, including on film, video recording, or other medium, broadcast or telecast, and any pictorial representation, design, or device used to encourage the use or notify the availability or promote the sale or any tobacco product or to promote smoking behaviour.*’ By this definition, this branded price listing seems to meet the definition of advertising.

8. Policy and Research Recommendations

The purpose of the Smoke-free Environments Act regarding the control of smoking products is outlined in Part 2 of the Act as:

To reduce the social approval of tobacco use, particularly among young people, by:

- i. imposing controls on the marketing, advertising, or promotion of tobacco products and their association with other products and events; and*
- ii. requiring health messages and other information to be displayed on, or included with, packages containing tobacco products, and on automatic vending machines; and*
- iii. prohibiting the sale of toy tobacco products to people younger than 18 years*

Our study has revealed that almost two-thirds of tobacco retailers in the Wellington region are failing to comply with the Point of Sale regulations of the Smoke-Free Environments Act 1990 and Amendments 2003. The commonest areas of non-compliance were the display of tobacco products within one metre of children's products, visibility of tobacco products from outside the store, and absence of a 'smoking kills' sign. Non-compliance, particularly for proximity of tobacco displays to children's products was commonest in dairies and convenience stores situated in areas with the highest proportions of children. In addition, several ambiguities in the legislation have allowed interpretations, which are in conflict with the apparent aims of the Act.

The results of our study therefore suggest that the Act is failing, particularly in its main aim of reducing social approval of tobacco smoking among young people. We believe therefore that change is urgently required in order to improve compliance and better achieve the stated purpose of the Act.

The lack of compliance observed raises issues regarding information and enforcement. Retailers are either ignorant of the requirements of the Act, misinformed, or are knowingly non-compliant.

There are several reasons to believe that deliberate non-compliance may be the least important of these. Firstly, there are barriers to access the required information. Many

of the retailers, particularly those running dairies, do not have English as their first language, and may therefore have difficulties interpreting the regulations. Secondly, there is no active enforcement of the Act, and hence little pressure to comply. Enforcement officers only respond to complaints, and have little regular contact with retailers, which could be an opportunity to educate them about the POS regulations. Conversely, our anecdotal evidence suggests that tobacco representatives are active in monitoring presentation and compliance of tobacco displays. Therefore the main source of information about the Point of Sale regulations may be the tobacco industry for most retailers, and they may well give a different interpretation of the regulations to those of enforcement officers. Finally, even if retailers are fully compliant, the wording of the law allows for loopholes, which defeat the purpose of the POS regulations – such as displaying large numbers of cigarette packets together next to multiple points of sale, or displaying tobacco products in the same line of sight as children’s products.

In view of the present inadequacies of the current legislation, we propose two alternative frameworks to strengthening the current regulations:

Framework 1: Permit point of sale displays but strengthen the regulations and enforcement mechanisms

- i. Strengthen the regulations and removing ambiguous areas and loopholes in the law.
- ii. Expanding the definition of tobacco products to include tobacco specific accessories.
- iii. Improve retailer education.
- iv. Increase resources to ensure that there is an active, systematic process of enforcement.

Framework 2: Introduce a complete ban on point of sale displays

Framework 1: Permit Point of Sale Displays but Strengthen the Regulations and Enforcement Mechanisms

Strengthening of Existing Regulations

Visual proximity to children's products

We recommend that a clause be introduced to prohibit the combining of tobacco displays across two or more points of sale. The clause should require the displays to be separated by a suitable distance. We also recommended that the definition of 'point of sale' be qualified as a 'point of sale in use'. This means that when a point of sale is not being used, the retailer would be required to cover the tobacco display for that point of sale.

The dissociation of tobacco products and children's products is more complicated. Ideally, the wording of the act should convey the message of a visual dissociation. However, as we have already discussed - although it is not effective to regulate this using only distance as the parameter, it is difficult to conceive an alternative objective parameter. For example, a clause that prohibited the positioning of tobacco products and children's products within the same line of sight would be difficult to implement, due to the subjectivity of the criteria. This could be left to the discretion of the enforcement officer.

International solutions to this problem include:

CANADA - Saskatchewan: *'no retailer shall permit tobacco products to be displayed in the retailer's business premises in which tobacco or tobacco related products are visible to the public if young persons are permitted to access those premises.'* This is equivalent to a POS ban in all premises where children can access.

CANADA – Manitoba: banning point of point of sale displays of tobacco products where they may be visible to children. This is also equivalent to a POS ban in all premises accessible to children.

However, in New Zealand as children are allowed ready access to supermarkets, dairies, convenience stores, and petrol stations, this would imply a complete ban on POS displays in these places.

Tobacco Specific Accessories

We recommend that the definition of tobacco products be expanded to include

tobacco specific accessories such as filters and filter papers, in order to create greater consistency within the law.

Retailer Education and Increasing Resources for Enforcement

At present there is no systematic Ministry of Health based framework for informing retailers of their obligations under the Smoke-free Environments Act. In 2004, following the amendment to the Act, The Ministry did an extensive mail out to retailers informing them of the changes to the Act. However, since then there has been no programme to ensure the continued education or compliance of retailers. The Ministry has since delegated responsibility for education and enforcement to the regional Public Health Units. As a result, due to lack of resources, there currently appears to be little retailer education about the POS regulations. The onus is therefore on retailers to seek out the information for themselves. In addition, resource constraints mean that compliance is not actively monitored. Enforcement officers are limited to responding to complaints from the public, who are probably even less aware of the detail of the POS regulations. This gives rise to a situation in which retailers are required to be largely self-regulating.

We recommend the development and implementation of an active education programme for retailers. In addition, we recommend that the capacity of enforcement officers be extended to allow them to play a more active role in monitoring compliance. Such measures could be resourced from revenue generated from the taxation of tobacco products.

Framework 2: Introduce a Complete Ban on Point of Sale Displays

The recent NZ ASH and Cancer Society report concluded that this was the most logical and effective option: *“A ban on retail displays would simplify compliance with the legislation. The current display restriction, in addition to being a successful opportunity to keep marketing, makes compliance difficult and vulnerable to exploitation.”* (Paynter et al., 2006)

The prohibition of Point of Sale marketing is not a radical proposal. There are already international precedents for the total ban on retail displays. Iceland, Ireland, Thailand and several of the Canadian states have introduced legislation banning retail displays of cigarettes.(Paynter et al., 2006)

The current state of legislation, which allows the prominent display of cigarettes,

though only if accompanied by a health warning, in a broad range of retail environments sends mixed messages about the social acceptability of smoking. The ubiquity of the sale of tobacco products and of tobacco displays creates the impression of tobacco use as highly prevalent, normal and socially acceptable behaviour. Banning POS displays in contrast sends a clear signal. The recent ASH review of the topic concluded: *“Removing tobacco from public view will convey a strong public message that tobacco is not the same as everyday household items like bread, milk or chocolate. In having tobacco out of sight there is no incidental promotion affecting adolescents and children”*. (Paynter et al., 2006)

Evidence for the efficacy of a ban comes from the tobacco industry itself, through the phenomenon known as the ‘scream test’. The scream test is based on the premise that the more resistant the industry is to a change, the more effective the proposed public health strategy is likely to be. Again the ASH review concluded: *“Tobacco industry effort to first circumvent and then legally challenge legislation in the Canadian province of Saskatchewan that prohibited the promotion and display of tobacco products in places accessible to people under 18 years also support the scream test theory.”* (Paynter et al., 2006) Internal tobacco industry documents confirm the importance that is attached to POS marketing by the tobacco industry. (Lavack et al., 2006)

Licensing of Tobacco Retailers

In both frameworks, we recommend the introduction of licensing of all tobacco retailers, so that retailers who breach the regulations can have their licence to sell tobacco, an inherently dangerous product, withdrawn. This will have the effect of facilitating the monitoring of compliance and enforcement; and reaffirm that tobacco products are highly dangerous and hence require special monitoring and control of their sale.

Recommendations for Future Research

To support the proposed policy changes, we suggest the following areas for future research:

1. In-depth study of the relationship between retailers and the tobacco industry;
2. Further surveys of compliance with POS regulations to include additional geographic areas, and to explore further compliance in relation to urbanicity,

ethnicity, socio-economic status, smoking prevalence (from the 2006 census), proximity of stores to schools. Additional studies might improve the methods for measuring compliance with number of packets/cartons and proximity to children's products by gathering photographic evidence.

3. Study of the impact on children of POS displays, through epidemiological and qualitative studies.
4. Study of the impact of large graphic health warnings at POS displays for tobacco products.

9. Conclusion

This study was designed to evaluate the effectiveness of the Smoke-free Act by measuring how closely the tobacco retailers complied with the Point of Sale regulations set out by the Act. We conclude that non-compliance by retailers is common. Particularly worrying is the high rate of non-compliance with key regulations on the proximity of tobacco product displays to children's products, and the increased rate of non-compliance in dairies and convenience stores situated in areas with high proportions of children in the population. We also observed that sale and display of tobacco products is ubiquitous in the most commonly visited retail environments in New Zealand.

These findings suggest that the principal objective of the Smoke-free Act POS regulations – to reduce the social approval of tobacco use, particularly among young people - is being frustrated. We conclude that the Smoke-free Act POS regulations are failing due to three major factors: poor knowledge of retailers about the POS regulations; lack of education about and enforcement of the POS regulations; and the difficulty of minimising the effects of tobacco displays on youth, if tobacco product displays are allowed in retail areas accessible to children.

We conclude that there are two possible frameworks for achieving the objectives of the POS regulations in the Smoke-free Acts – either to strengthen the POS regulations and increase retailer education, monitoring and enforcement; or to ban POS displays in all retail environments accessible to children. Of these only the latter seems likely to unequivocally achieve the purpose of the Smoke-free Environments Acts.

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Appendix One: Suburbs Surveyed

Akatarawa	Johnsonville North	Solway North
Ascot Park	Karori Park	Masterton West
Avalon East	Kelson	Masterton East
Berhampore	Kingston	Masterton Railway
Brooklyn	Kelburn	Lansdowne
Clouston Park	Kilbirnie East	Solway South
Cannons Creek East	Khandallah Park	Mt Cook-Wallace Street
Carterton	Lambton	Mt Victoria West
Elsdon-Takapuwahia	Levin West	Ngaio
Epuni East	Levin East	Tuturumuri
Epuni West	Linden	Naenae North
Featherston	Lyall Bay	Newlands North
Gracefield	Mana-Camborne	Newlands South
Greytown	Maungaraki	Newtown East
Heretaunga- Silverstream	Melling	Newtown West
Holborn	Miramar North	Adelaide
Hataitai	Martinborough	Oriental Bay
Island Bay East	Manuka	Otaki
Island Bay West	Miramar South	Happy Valley-Owhiro Bay
Johnsonville South	Masterton Central	
	Homebush-Te Ore Ore	

Paekakariki	Totara Park
Paraparaumu Central	Upper Hutt Central
Paraparaumu Beach	Waikanae Beach
South	Waikanae East
Pauatahanui	Waikanae West
Plimmerton	Waitangirua
Porirua Central	Waitarere
Porirua East	Wadestown
Kahutara	Discovery
Paparangi	Adventure
Petone Central	Willis Street-
Pukerua Bay	Cambridge Terrace
Raumati South	Wilford
Roseneath	Homedale West
Seatoun	Glendale
Taita South	Parkway
Taita North	Homedale East
Tawa South	Woburn South
Thorndon-Tinakori Road	Woburn North
Te Marua	Waiwhetu South
Trentham North	
Titahi Bay North	
Titahi Bay South	

Appendix Two: Data Collection Form

University of Otago

Wellington School of Medicine

5th Year Medicine Public Health Project



Tobacco Retailer's Compliance with the 2003 Smoke Free Environments Amendment Act

Name of retailer:

Location: _____

Date _____

Deprivation Index: _____

- Type of retailer:
- Dairy
 - Supermarket
 - Service station
 - Convenience store

Criteria checklist as per Smokefree Environments Act

if compliant, if not compliant

- (A) No tobacco product visible from outside the place of business
- (B) Less than 100 packages or 40 cartons are exposed at any POS
- (C) Less than 2 packages or cartons of the same kind are exposed at any POS
- (D) No tobacco product exposed on any counter top
- (E) No tobacco displayed within 1m of children’s products
(incl. all confectionery, ice-cream, soft drinks, comics etc)
Store too small
- (F) “Smoking kills” sign visible if tobacco products are displayed within 2m of a
POS*
- (G) Smoking kills sign is at least 1m² or 10% of cigarette display size (lesser of the
two)
- (H) No bundling of cigarettes with other products
- (I) No incentives or rewards on offer regarding the sale of cigarettes

* must be on white background, state “Smoking Kills”, and also in Maori underneath