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**Authors Queries**

**Journal:** Nicotine & Tobacco Research  
**Paper:** 324053  
**Title:** In sight, in mind: Retailer compliance with legislation on limiting retail tobacco displays
In sight, in mind: Retailer compliance with legislation on limiting retail tobacco displays

Megan Quedley, Brendan Ng, Nikhil Sapre, Matthew Blakiston, Alexandra Crawford, Rosanne Devadas, Hamish McLaren, Shruti Anand, Mahu Tipu, Viswas Dayal, Singithi Chandrasiri, George Thomson, Richard Edwards

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We investigated retailer compliance with point-of-sale display legislation, using a New Zealand region as a case study. An observational survey was conducted of nonspecialist tobacco retailers in the lower North Island of New Zealand during 2006. Compliance was assessed in relation to store type (dairies, convenience stores, supermarkets, and service stations) and by characteristics of the population of the census area unit in which the store was situated. These characteristics include the level of socioeconomic deprivation and proportions of Maori (indigenous New Zealanders), Pacific Islanders, and children aged less than 19 years. Out of the 288 stores surveyed, 185 (64%) had at least one breach of the point-of-sale regulations. The most common breaches were a failure to display a “Smoking Kills” sign, visibility of tobacco from outside the premises, and displaying tobacco less than 1m from children’s products. Compliance was significantly worse in dairies (small local general stores) and convenience stores. Stores situated in areas in the top quartile for the proportion of children were much more likely to have high levels of noncompliance (≥3 breaches) and to display tobacco products close to children’s products. This study is one of very few to systematically investigate retailer compliance with point-of-sale display regulations for tobacco products. The results suggest that the implementation of legislation to partly limit retail displays of tobacco products can be difficult. A ban on retail displays of tobacco products is likely to be a more effective and enforceable policy.

Introduction

As in many other jurisdictions (Apte & Viswanathan, 2002; Bloom, 2001; Carter, 2003; Dewhirst, 2004; Feighery, Ribisl, Clark, & Haladjian, 2003; J Gottheil Marketing Communications Inc., 2005), tobacco product retailing practices in New Zealand have changed in response to increasing restrictions on advertising, by increasing the role of retail displays as a marketing method for tobacco products. Tobacco industry documents identify the increasing importance of point-of-sale advertising internationally (Lavack & Toth, 2006). In countries where tobacco marketing is largely or wholly banned, point-of-sale displays (i.e., highly attractive product displays at the point where the customer pays for purchases) may now be the most important communication channel between smokers, or potential smokers, and the tobacco industry.

The high visibility and ubiquitous accessibility of tobacco products—in the most commonly visited retail environments—helps reinforce smoker loyalty, sensitizes youth to brands, and prompts impulse buying (Lavack & Toth, 2006; Wakefield, Germain, Durkin, & Henriksen, 2006). Some evidence indicates that point-of-sale displays may specifically target children (Feighery, Ribisl, Schleicher, Lee, & Halvorson, 2001; Wakefield et al., 2006). Most cigarette smokers start before the age of 16. Therefore, this age group is the key potential market from which the tobacco industry gets its next generation of consumers.

In many countries, governments have responded to the increasing importance of point-of-sale displays by introducing codes of practice or legislation...
restricting the type, amount, and location of such displays.

Evidence indicates that payments are made to New Zealand retailers to ensure tobacco products are displayed prominently (Forbes, 2005; Laugesen, 1999; Masters, 1999). The tobacco retail sector in New Zealand includes supermarkets, dairies (small general stores selling mainly tobacco, confectionary, newspapers, magazines, and basic grocery items), and convenience stores (small- to medium-sized general stores with a similar range of products to dairies but a wider selection of grocery items), service stations (gas stations with a similar range of products to convenience stores, mainly to supplement gasoline sales and automotive products), pubs, tobacconists, and some liquor outlets.

Smoking is a major public health problem in New Zealand, with health equity problems due to the much higher prevalence associated with lower socioeconomic status and Pacific Islander (ethnic groups from Pacific Island states such as Samoa) and Maori ethnicity. Maori are the indigenous people of New Zealand, and they make up 15.3% of the New Zealand population (Statistics New Zealand, 2007).

To help achieve the government’s aim “to reduce the social approval of tobacco use, particularly among young people”, the 2003 New Zealand Smoke-free Environments Amendment Act (SEAA) imposed additional controls on the marketing, advertising, or promotion of tobacco products, including requiring tobacco retailers to comply with a series of point-of-sale regulations (Table 1). In addition, Section 30(6) of the SEAA requires tobacco retailers to have a notice stating that the sale of tobacco products to those under 18 years is prohibited (New Zealand Ministry of Health, 1990, 2003). Following passage of the SEAA in 2003, the Ministry of Health sent one extensive mailing to retailers, describing the new regulations. Since then, little information has been provided to retailers or the public about the point-of-sale display regulations. Active enforcement of these regulations has been minimal given that, due to resource constraints, enforcement officers have been limited to responding to complaints from the public. Fines of up to NZ$10,000 are possible for breaches of the regulations, but we found no evidence of any prosecution under these rules.

The international literature assessing retailer compliance with point-of-sale display regulations is limited (Letcher, Cameron, Inglis, & Wakefield, 2002), and we were unable to find any studies conducted overseas or in New Zealand that assessed retailer compliance with national point-of-sale laws. We therefore decided to assess compliance with the current regulations in New Zealand and to examine whether compliance varied with socioeconomic status, population density, ethnicity, and the proportion of children in the local population served by individual stores.

Our hypotheses were that there would be a higher degree of noncompliance with point-of-sale regulations among tobacco retailers in areas with (a) higher socioeconomic deprivation, (b) a higher proportion of Maori, (c) a higher proportion of Pacific Islanders, or (d) a higher proportion of children.

**Method**

**Store selection**

We aimed to survey all tobacco retailers in the area of the Greater Wellington Regional Council in the lower North Island of New Zealand, excluding specialist tobacconists and premises licensed to sell alcohol. We omitted the latter two retailer types because the regulations for the display of tobacco products in tobacconists are different, and licensed premises tend to sell tobacco only via vending machines. These two types of premises sell less than 10% of the tobacco sold in New Zealand.

The Wellington Regional Council area has a population of approximately 450,000, about 10% of the New Zealand population (Statistics New Zealand, 2007). The area was chosen because it includes a range of urban, suburban, small town, and rural areas and was logistically practical for the survey.

**Table 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.
- Maximum of two packages of the same kind at the same point of sale (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 countertop 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 to 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 66 cm², pouch pack 105 cm², carton 266 cm².
- The legislation defines “point of sale” as “a checkout where tobacco products may be bought” or a cash register, even if it is not part of a checkout.
We used the online New Zealand Yellow Pages to identify nonspecialist retailers, because this was the most comprehensive available database of retail outlets. We identified 300 retailers who were likely to sell tobacco. Four were excluded because they were no longer trading. Stores were allocated, according to the judgment of the observers, to the four categories of dairy, convenience store, service station, or supermarket.

Data collection

The survey was conducted using a prepiloted checklist, which included nine different categories matching the point-of-sale regulations in the SEAA. The checklist was developed after consultation with enforcement officers responsible for investigating complaints about violations of the point-of-sale regulations within District Health Boards. We randomly allocated each of 10 observers to a location in which to survey all of the stores over a 1-week period during August–September 2006. The observers visited stores unannounced and, while in the store, judged whether the store was compliant or noncompliant with each of the nine categories on the checklist.

We assessed the tobacco product display at the store point of sale (as defined in Table 1). For stores with multiple points of sale (mainly supermarkets) where there was variable noncompliance, we analyzed compliance at the point of sale where noncompliance was highest. For visibility of tobacco products from outside a service station, we assessed this from outside the forecourt, as this is the interpretation of the SEAA legislation advised by the Ministry of Health. To preserve the anonymity of the observers, the proximity of tobacco products to children’s products, and of the size and proximity of the “Smoking Kills” sign to a point of sale, were visually estimated.

To test the interobserver reliability of our survey instrument, we randomly selected 24 stores in the Wellington City area and carried out a repeat assessment by a different observer.

We used the Statistics New Zealand’s online map (www.stats.govt.nz) to identify the location and census area unit of each store, and we used the 2001 census to gather information about the level of deprivation, ethnicity, population density, and age distribution of the census area unit where each store was located. The level of deprivation was based on the NZDep 2001 Deprivation Index, which combines nine census variables from the 2001 census that reflect aspects of material and social deprivation in the census area unit (Crampton, Salmond, & Kirkpatrick, 2004). Gathering of area unit information was done after the data collection in the stores so that the observers were blind to this information.

Ethics approval was obtained through the University of Otago ethical review system.

Data analyses

We used Intercooled Stata version 9.1 for the analyses. During analyses, we grouped stores according to the following potential determinants of compliance:

- By store type. Dairies and convenience stores were grouped together in most analyses, because these store types are similar in size and range of products sold and their frequency of violations of the point-of-sale regulations were similar.
- By decile of deprivation. Stores were grouped by the NZDep score of their census area unit: (a) deciles 1–4 (low deprivation), (b) deciles 5–7 (medium deprivation), and (c) deciles 8–10 (high deprivation).
- By quartiles of the percentage of Maori and Pacific Islanders in the population of the store census area units.
- By quartiles of the percentage of children (aged <19 years) in the population of the store census area units.
- As urban or nonurban, accepting the definitions of Statistics New Zealand for “main urban” and anything else as “nonurban”.

We calculated descriptive statistics for the distribution of breaches of point-of-sale regulations by potential determinants of compliance. We investigated the association between potential determinants and compliance (any violations, ≥3 violations, and the three most common individual violations) by calculating crude and adjusted odds ratios using logistic regression analysis.

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

Results

Response and store characteristics

We surveyed 288 out of 296 (97.3%) of eligible stores that had tobacco products displayed for sale. Eight stores were not surveyed due to observer error. The 288 stores were located in 102 census area units across the lower North Island. The characteristics of the stores are shown in Table 2.

Results of the reliability study

The overall level of agreement between observers for each of the nine categories of possible violations assessed varied between 70% and 100%. Analyses
The most common breaches of the regulations were (a) failure to appropriately display a “Smoking Kills” sign (30% of all stores), (b) point-of-sale display visible from outside the store (25%), (c) tobacco products displayed within 1m of children’s products (24%), and (d) displaying more than 100 packets per point of sale (16%). There was very low noncompliance with the prohibition of countertop displays (0.7%), copackaging or “bundling” of tobacco (0.7%), or offering additional incentives to buy tobacco products (1.4%).

Compliance with point-of-sale regulations by store type

Compliance with the point-of-sale regulations was worst among dairies and convenience stores (Table 3). This pattern was consistent across all individual regulations except for the display of a “Smoking Kills” sign and for having more than two packs displayed at the same point of sale, where supermarkets were similarly noncompliant with dairies and convenience stores.

The results of the logistic regression analysis for the association between the potential determinants and overall compliance with the point-of-sale regulations are shown in Table 4. The main finding was that the strongest predictor of any violations of the point-of-sale regulations was store type. Dairies and convenience stores were much more likely to have one or more breaches. The proportion of children in the census area unit where the store was situated also was a statistically significant predictor when included in the model as a linear term. Store type and proportion of children in the census area unit were predictors of stores having three or more violations. Dairies and convenience stores were much more likely to have multiple breaches of the regulations. Ethnicity (as measured by the proportion of Pacific Islanders and Maori in the census area unit) and area deprivation level were not significantly associated with overall compliance.

Table 3. Noncompliance by store type.

<table>
<thead>
<tr>
<th>Degree of noncompliance</th>
<th>Convenience stores (n=35)</th>
<th>Dairies (n=141)</th>
<th>Service stations (n=83)</th>
<th>Supermarkets (n=29)</th>
<th>All stores</th>
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<tbody>
<tr>
<td>None</td>
<td>6 (18)</td>
<td>33 (24)</td>
<td>48 (56)</td>
<td>16 (53)</td>
<td>103 (36)</td>
</tr>
<tr>
<td>1</td>
<td>11 (32)</td>
<td>43 (31)</td>
<td>28 (33)</td>
<td>10 (33)</td>
<td>92 (32)</td>
</tr>
<tr>
<td>2</td>
<td>9 (26)</td>
<td>36 (26)</td>
<td>7 (8)</td>
<td>2 (7)</td>
<td>54 (18)</td>
</tr>
<tr>
<td>≥3</td>
<td>8 (24)</td>
<td>27 (19)</td>
<td>2 (2)</td>
<td>2 (7)</td>
<td>39 (14)</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>139</td>
<td>85</td>
<td>30</td>
<td>288</td>
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<tr>
<th>Type of noncompliancea</th>
<th>Convenience stores (n=35)</th>
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<th>Supermarkets (n=29)</th>
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<tr>
<td>“Smoking Kills” sign not displayed</td>
<td>11 (32)</td>
<td>51 (37)</td>
<td>12 (14)</td>
<td>12 (40)</td>
<td>109 (38)</td>
</tr>
<tr>
<td>Visible from outside store</td>
<td>13 (36)</td>
<td>47 (34)</td>
<td>13 (15)</td>
<td>0 (0)</td>
<td>72 (25)</td>
</tr>
<tr>
<td>&gt;100 packages</td>
<td>26 (32)</td>
<td>26 (19)</td>
<td>8 (9)</td>
<td>1 (3)</td>
<td>45 (16)</td>
</tr>
<tr>
<td>&gt;2 packages in same display</td>
<td>7 (20)</td>
<td>16 (11)</td>
<td>3 (3)</td>
<td>5 (17)</td>
<td>30 (10)</td>
</tr>
<tr>
<td>&lt;1 m to children’s products</td>
<td>13 (38)</td>
<td>47 (34)</td>
<td>6 (7)</td>
<td>2 (7)</td>
<td>66 (23)</td>
</tr>
</tbody>
</table>

Note. All values are numbers of stores with percentages. aOnly those categories with more than 10 total noncompliances are shown.
The results for the logistic regression analysis, for predictors of compliance with the three regulations that were breached most frequently, revealed a similar pattern (Table 5).

For violation of the proximity of tobacco displays to children’s products, the odds of a violation were increased significantly for dairies and convenience stores, and also for stores situated in census area units with the highest proportion of children. The odds of a violation in the visibility of tobacco displays from outside the store were significantly increased among dairies and convenience stores. For appropriate display of a “Smoking Kills” health warning sign, the odds of a violation were increased among dairies and convenience stores, and for supermarkets in comparison to service stations. The odds of a violation of this regulation also were increased in communities with an increased proportion of Maori, although there was no association between overall compliance and the proportion of Maori in the census area unit (see Table 4).

We found no significant differences in the likelihood of breaches of the point-of-sale regulations among shops (all subtypes) in urban (68%) versus nonurban areas (63%).

As an illustration of these effects, the proportion of stores noncompliant with three or more regulations varied from 1 out of 43 (2%) service stations.
and supermarkets, to 5 out of 43 (12%) dairies and convenience stores in census area units with the lowest quartile proportion of children, to 24 out of 56 (39%) dairies and convenience stores in census area units with the highest quartile proportion of children. The equivalent figures for violation of the regulation on displaying tobacco products within 1m of children’s products were 5/43 (12%), 10/43 (23%), and 31/56 (55%), respectively.

Discussion

Main findings

In the present study all retailers surveyed were found to be displaying tobacco products. This finding illustrates the wide availability and visibility of tobacco products in the New Zealand retail environment. The 64% rate of noncompliance with regulations among the tobacco retailers we surveyed suggests that the current point-of-sale regulations are ineffective. Although the present study was limited to the lower North Island, discussion with enforcement officers from other jurisdictions in New Zealand indicated that these results reflected observations in their own areas.

Interpreting the findings

We suggest that in this jurisdiction, two main factors are contributing to the high rate of noncompliance: a lack of awareness among retailers and the general public regarding the tobacco point-of-sale regulations, and an almost total absence of enforcement of the act. At present, enforcement officers act only in response to complaints from the public. This passive enforcement system gives rise to a situation where noncompliance is common and reporting of violations is unlikely. A license to sell tobacco is not required in New Zealand; hence, there is no readily available list of retailers, which makes systematic enforcement difficult to carry out.

An interpretation of the findings with more general application across similar jurisdictions is that where tobacco retail displays are allowed, attempts to control and limit them will be complicated, and active enforcement may be expensive. Many aspects of such displays need to be considered in making and implementing such partial controls.

In the present study, dairies and convenience stores were far less compliant than supermarkets and service stations. This could be due to the inherent differences between these two groups. Supermarkets and service stations are part of larger companies or franchises (as opposed to dairies and convenience stores, which are often independently owned); therefore, they are likely to have stricter compliance standards expected of them by the franchising company. Supermarkets and service stations may have stronger incentives to comply with all laws, so as to not generate bad publicity for their parent company. In addition, tobacco sales may make up a higher proportion of income for dairies and convenience stores; thus they may have a greater incentive to promote tobacco sales.

Our results demonstrated that dairies and convenience stores in areas with the highest percentage of children had the highest rates of noncompliance. Whether this is by accident or by design is not clear from the study. However, this finding is almost irrelevant, given that the end result is the same: the current New Zealand retail environment allows for the widespread marketing of tobacco to children. Research in other jurisdictions that suggests that the density of retail outlets may increase the risk of youth smoking, and that displays may be a particular danger for youth, provides further support to these findings (Feighery et al., 2001; Novak, Reardon, Raudenbush, & Buka, 2006; Wakefield et al., 2006).

The present results are similar to those from an observational study following the implementation of retail tobacco promotion and display regulations in Victoria, Australia. That study found high compliance with many aspects of the new law 3 months after its introduction but poor compliance with regulations on the size of price tickets (38% noncompliance) and the overall size of the tobacco product displays (26% noncompliance), and moderate (12%–13%) noncompliance with the display of health warnings and signs to deter underage purchases (Letcher et al., 2002). Interestingly, in the Victoria study, more than half of the tobacco products were displayed next to or behind confectionary products.

Strengths and weaknesses

An important strength of the present study is the 97% coverage rate within the sampling frame. We collected data using a piloted checklist developed with the assistance of enforcement officers who were experts in the interpretation and monitoring of the SEAA regulations. To minimize the introduction of observer bias, surveyors were blind to the census area unit demographics of each store at the time of the survey.

The study also had some potential weaknesses. We excluded some possible participants by selecting the study population from the yellow pages, which is not a complete list of retailers. Potentially more participants were missed in this way than the eight missed by observer error. However, we have little reason to believe that any of those few retailers would be more or less compliant, and these exclusions are unlikely to have introduced significant bias.
Another potential source for error in the study is the use of visual estimates in some aspects of data collection, particularly for proximity of tobacco and children’s products displays in stores. However, the results of the reliability study suggested that there was a learning effect for observers during the study and, if anything, we underestimated the degree of noncompliance with the point-of-sale regulations in the main survey.

Because the study excluded tobacco retailers in the hospitality setting, such as bars, our ability to extrapolate the study findings to this sector is limited. However, only 5% of British American Tobacco sales in New Zealand in 1997 were in hospitality outlets (Wills New Zealand, 1997), and due to restrictions on vending machines and smoking in bars since then, this is unlikely to have increased.

Inadequacies identified in current New Zealand point-of-sale legislation

In addition to widespread noncompliance, we identified two important loopholes during the fieldwork that further undermine the purpose of the SEAA. First, the law requires that no more than 100 packages be displayed per point of sale. However, we observed many retailers with much larger displays that were close to more than one point of sale and thus did not contravene the letter of the regulations. Several retailers with displays larger than 100 packs appeared to be using a deliberate tactic to get around the regulations over the size of displays, as they had a redundant cash register, which was obviously not plugged in or turned on, presumably so that it could be designated as a second point of sale.

Second, in an attempt to dissociate children’s products from tobacco, the SEAA states that tobacco products cannot be within 1m of these products. However, not only is this regulation frequently breached, but even if a store is compliant, the regulation does not prevent tobacco and children’s products from being framed in the same visual field. This allows a visual association and therefore defeats the purpose of the 1m separation requirement (Figure 1).

Policy implications

We believe the present findings have implications for policies to regulate retail display of tobacco in New Zealand and internationally. We found that, despite considerable strengthening of the legislation on point-of-sale displays, tobacco products were almost ubiquitously on prominent display in key retail environments and that there was widespread noncompliance with even the limited point-of-sale display restrictions in place.

We therefore propose two frameworks to strengthen the current New Zealand regulation of tobacco retail displays, and which might also be relevant in other countries and jurisdictions.

Framework 1. Permit point-of-sale displays but strengthen the regulation and enforcement mechanisms and retailer education. Suggested changes could include the following:

- Prohibit the combination of tobacco displays from two or more points of sale.
- Dissociate tobacco more clearly from children’s products by introduction of a clause prohibiting tobacco and children’s products from being in the same line of sight at point of sale, and increasing the distance to at least 2m.
- Communicate more about the regulations to the public and retailers, and introduce active enforcement of the act with appropriate resource allocation.

This suggested framework would be an improvement on the current situation; however, it would be practically difficult and expensive to implement and enforce this policy (particularly ensuring tobacco products and children’s products are not in the same line of sight), and tobacco products would remain displayed in the most visited retail environments.

Framework 2. Introduce a complete ban on point-of-sale displays. We suggest that this would be an easier framework to enforce and would remove any ambiguity regarding the legality of a display. There are similar frameworks in Iceland, Thailand, and several Canadian provinces such as Saskatchewan and Manitoba (Hamann, 2005; Tilson, 2004). This approach may not be possible in all countries, given constitutional and other legal constraints, but its
successful implementation in these jurisdictions sets a precedent for many countries.

In both frameworks we recommend the introduction of tobacco sale licensing. This would facilitate easier monitoring of compliance and enforcement of the regulations, and it would allow for licenses to be withdrawn from retailers who breach the regulations. Licensing fees also could be used to fund implementation, education, and enforcement, thus increasing compliance and making the legislation sustainable. If licensing were used to limit the types or numbers of outlets selling tobacco, then the research findings indicate that controlling displays or a display ban may be easier in outlets that are part of larger companies or franchises.

Conclusion

Our findings suggest that where point-of-sale regulations are introduced, they need an appropriate monitoring and enforcement mechanism. Otherwise, noncompliance will be high. Given the contradiction between allowing tobacco product displays and preventing youth exposure to tobacco marketing, we believe that the best policy option is to ban all retail tobacco product displays and introduce a licensing system for tobacco retailers.

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Declaration of interest: The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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